CA

ENVIRONMENTAL DATA AVAILABLE

from the

OIL SHALE PROJECT OFFICE
GRAND JUNCTION, COLORADO

1974 - 1984

One of the responsibilities of the Oil Shale Project Office was to store and manage environmental data collected on the Prototype Oil Shale Lease Tracts by the Lessees.

The objective of this report is to allow potential users the ability to determine if environmental data is available and in what format it resides in storage.

The data is subdivided into five main monitoring activities:

1. Air Quality and Meteorology
2. Terrestrial
3. Aquatic
4. Hydrology
5. Special Studies

A few maps are included with the data to show some of the monitoring sites.

Table 1
Outline of Monitoring Activities with Data on the Computer

I. AIR QUALITY and METEOROLOGY
- A. Air Quality
- B. Meteorology
- C. High Volume Particulate
- D. Precipitation
- E. Radar

II. TERRESTRIAL
- A. Abiotic
  - 1. Soils
- B. Biotic
  - 1. Vegetation
    - a. Phytosociological studies
    - b. Range productivity and utilization
    - c. Browse condition and utilization
  - 2. Fauna
    - a. Small mammal studies
    - b. Avifauna studies
    - c. Mule deer density
    - d. Mule deer road kill study
    - e. Bird

III. AQUATIC
- A. Abiotic
  - 1. Physical measurements
  - 2. Water quality measurements
- B. Biotic
  - 1. Periphyton
  - 2. Benthos

IV. HYDROLOGY
- A. Surface Water Monitoring
  - 1. Surface flows and discharges
  - 2. Springs and seeps
  - 3. Impoundments/mine sumps/sediment and runoff control ponds
  - 4. Water quality
  - 5. Erosion and sedimentation
- B. Ground Water Monitoring
  - 1. Bedrock wells
  - 2. Alluvial wells
  - 3. Hydrologic testing
  - 4. Water quality
- C. Shaft

V. SPECIAL STUDIES

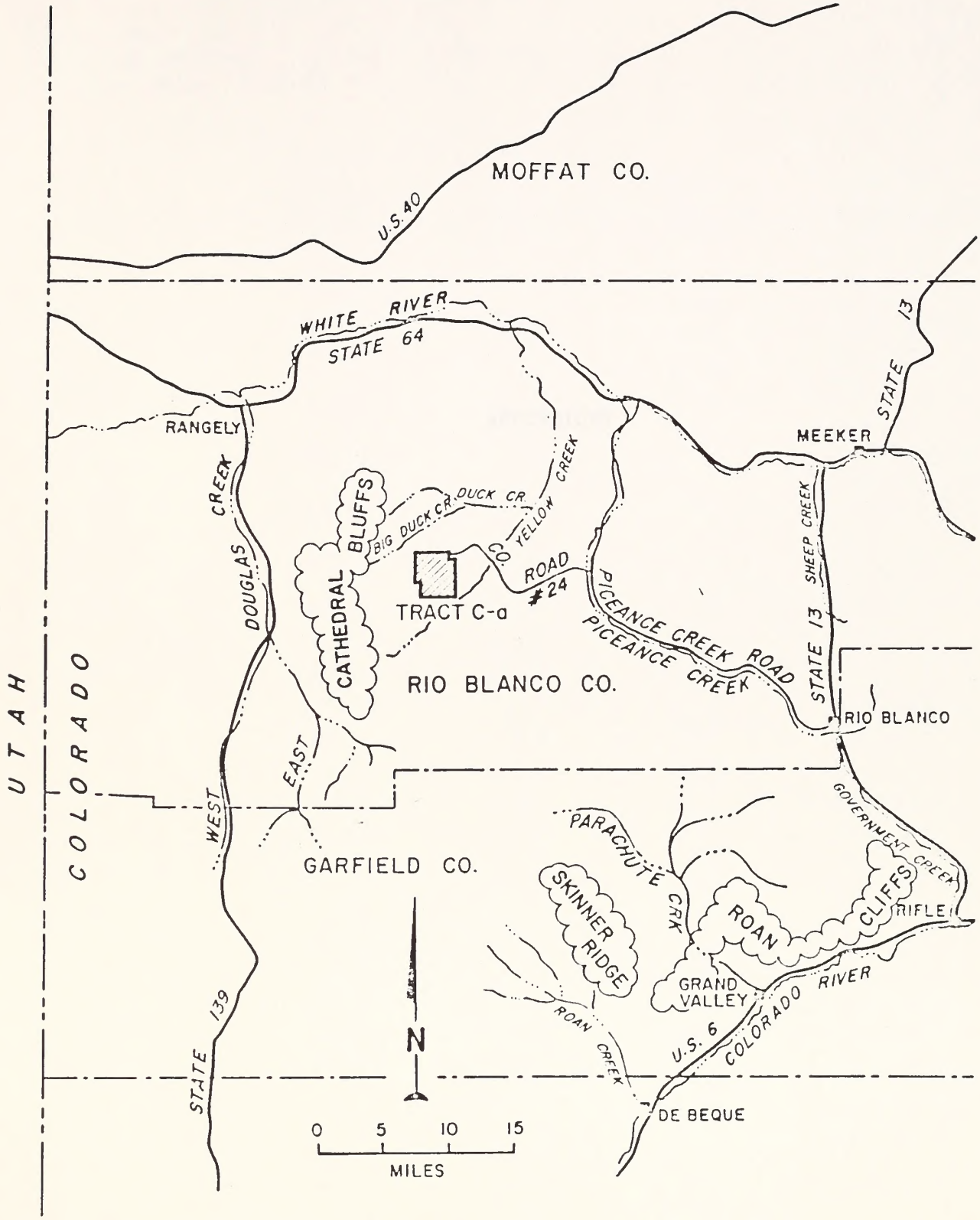


Figure 7-2-2

LOCATION MAP OF TRACT C-a

APPENDICES

Table 2.I

Tract: C-a
Monitoring Activity: Air Quality and Meteorology
Inventory Date: 5/19/81

OSO File Name	Initial Date (mo/yr)	Final Date (mo/yr)	Page No.	Data Description
aqmbl	02/75	5/31/76	I-1-4	These four OSO files contain all baseline Air
aqmbl2	--	--	I-1-4	Quality & Meteorology data collected on Tract
aqmbl3	--	1/31/77	I-1-4	C-a
dv9171	06/79	11/79	I-18	Hi-Volume Particulate
dv9172	06/79	11/79	I-18	Hi-Volume Particulate
prcl23	12/79	05/80	I-15	Precipitation-Sites, 1,2
hiv79	12/79	05/80	I-19	Hi-Volume Particulate
prc780	09/77	11/80	I-14	Precipitation-Sites 1,2
prt780	08/77	11/80	I-16	Hi_Vol Particulate
prtbl	03/75	11/76	I-16	Hi_Vol Particulate (Baseline)
prcbl	02/75	11/76	I-12	Precipitation-Sites 1,2
prc801	06/80	11/80	I-13	Prec Site 1
prc802	06/80	11/80	I-13	Prec Site 2
prc803	06/80	11/80	I-13	Prec Site 3
prt80	06/80	11/80	I-20	Hi_Vol Particulate
aqmt80	06/80	11/80	I-9	Air Qual. & Met.
armt13	06/78	11/78	I-8	Air Qual. & Met.
sar3	12/77	05/78	I-7	Air Qual. & Met.
nuso2	09/77	11/77	I-6	Air Qual. & Met.
nusol	2/01/77	08/77	I-5	Air Qual. & Met.
prc81	12/80	12/81	I-14	Precipitation
J4A-1	12/80	05/81	I-11	Air Qual. & Met.
J4B-1	06/80	05/81	I-11	Air Qual. & Met.
part81	12/80	12/81	I-16	Particulate
j26_17	1977	1983	I-17	Meteorology Site
j26_18			I-21	Air Quality Site
j16.32	01/82	06/82	I-22	Air
j16.34	07/82	12/82	I-22	Air
j16.33	01/82	06/82	I-23	Met
j16.35	07/82	12/82	I-23	Met
j48_4	1984		I-24	Air
j48_6	1984		I-25	Met

Table 2.II

Tract: C-a
Monitoring Activity: Terrestrial
Inventory Date: 5/19/81

OSO File Name	Initial Date (mo/yr)	Final Date (mo/yr)	Page No.	Data Description
sch380			II-21,22	Soil Chemistry
phy79	06/79	06/79	II-23	Phytosociological
phy80	06/80	06/80	II-24	Phytosociological
rnpr	09/78	09/78	II-17	Range Productivity
rprd	09/79	09/79	II-18	Range Productivity
rprd80	09/80	10/80	II-19	Range Productivity
br78	05/78	05/78	II-13	Browse
br79	05/79	05/79	II-13	Browse
brsp80	04/80	05/80	II-15	Browse
br7677	12/76	05/77	II-12	Browse
br80	04/80	05/80	II--14	Browse Utilization
mm79	06/79	06/79	II-9	Small Mammals
smam80	06/80	06/80	II-11	Small Mammals
avi79	06/79	06/79	II-7	Avifauna
avi80	06/80	06/80	II-	Avifauna
smpd78	05/78	05/78	II-2	Mule Deer Pellet Ct.
fmpd78	09/78	09/78	II-1	Mule Deer Pellet Ct.
ml79	05/79	09/79	II-3	Mule Deer Pellet Ct.
mlsp80	05/80	05/80	II-4	Mule Deer Pellet Ct.
fm80	09/80	09/80	II-5	Mule Deer
sfmd81	Spring	Fall/81	II-6	Mule Deer PelletCt.
avi81	03/81		II-8	Avifauna
sm81	06/81		II-10	Small Mammals
br81	04/81	05/81	II-15	Browse
rbr81	06/81	--	II-16	Browse
ran81	8/26/81	9/10/81	II-20	Range Productivity
derk81	01/79	12/81	II-26	Deer Kill
rcoa81	06/81	--	II-27	Range Cover
rbia81	06/81	--	II-27	Range Bio
rcob81	06/81	--	II-28	Range Cover
rbib81	06/81	--	II-28	Range Bio
rccd81	06/81	--	II-28	Range Cover
rbcd81	06/81	--	II-28	Range Bio
pht81	06/81	--	II-25	
site location			II-(a-g)	lat-lon
j48_16	1984		II-30	Mule Deer Habitat
j16.27	1978-1982		II-31	Deer Pellet Count
j16.19	1979-1982		II-32	Phytosociological
j16.18	1977-1982		II-33	Browse Cond. & Util.
j26_9	1978-1983		II-34	Mule Deer Pellet Ct.

Table 2.III

Tract: C-a
Monitoring Activity: Aquatic
Inventory Date: 5/19/81

OSO File Name	Initial Date (mo/yr)	Final Date (mo/yr)	Page No.	Data Description
gmcd79	04/79	10/79	III-11	White River Chemical
gmps79				Periphyton Species
gppd79	04/79	10/79	III-10	Periphyton
gpbd79	04/79	10/79	III-9	Periphyton Biomass
per80a	04/80	04/80	III-8	Periphyton
per80m	05/80	05/80	III-8	Periphyton
gmbs79				Benthos Species List
bena80	04/80	04/80	III-6	Benthos
benm80	05/80	05/80	III-6	Benthos
gbd79	04/79	10/79	III-4	Benthos
aqbn80	04/80	10/80	III-5	Benthos
aqpr80	04/80	10/80	III-3	Periphyton
aqch80	04/80	08/80	III-2	AQU. Chem
aqc280	04/80	08/80	III-2	AQU. Chem
aqph80	04/80	10/80	III-1	AQU. Physical
aprbio	04/80	10/80	III-7	Periphyton Biomass
aqch81	04/81		III-12,13	Aqu.chem
aqc281	04/81		III-12,13	Aqu.chem
aqph81	04/81		III-14	Aqu.Physical
per81	04/81		III-15	periphyton
ben81	04/81		II-16	Benthos
j16.14	1982		III-17	Water Chem
j16.16	1982		III-18	Benthos
j26_8	1979-1983		III-19	Aquatic-Benthic Macroinvert
j26_7	1974-1982		III-20-22	Aquatic Stream Physical
j16.17	1982		III-23	Aqua Periphyton
per180				periphyton list
ben180				benthos list
j16.15	1982		III-24	physical

Table 2.IV

Tract: C-a
Monitoring Activity: Hydrology
Inventory Date: 5/19/81

OSO File Name	Initial Date (mo/yr)	Final Date (mo/yr)	Page No.	Data Description
stream	02/78	11/78	IV-10	Stream
seep	10/77	09/78	IV-9	Seeps
usgs	06/76	04/79	IV-8	Water Qual.Instant-aneous
usgscn	06/76	05/78	IV-7	Water Qual.Continuos
erodl	06/78	11/78	IV-6	Erosion
erod28	12/78	05/79	IV-5	Erosion
ldep	04/77	11/78	IV-4	Deep Wells Water Levels
lalu	10/77	11/78	IV-1	Alluvial Wells Water Levels
pmpda	005/78	11/78	IV-2	Hydrologic Testing Pumping
pmp28	01/79	05/79	IV-3	Hydrologic Testing Pumping
w82	01/82	12/82	IV-11	
alwq81	03/75	11/80	IV-22	water Quality
upwq81	03/75	11/80	IV-22	water Quality
unwq81	03/75	11/80	IV-22	water Quality
alph81	00/79	00/80	IV-13	
upph81	00/75	00/80	IV-13	
lph81	00/75	00/76	IV-13	
unph81	1980	2 months	IV-13	
feld81	1981		IV-14	Field Hydro
dmph81	1980 only		IV-15	
seep81	10/77	05/80	IV-16	Seeps & Springs
usgs81	03/74		IV-17	
erod81			IV-18	
dams81	1979	1981	IV-19	
usgm81	09/74	09/79	IV-20	
uswq81	08/74	10/80	IV-21	
d2wq81	08/79	10/80	IV-12	
spwq81	08/80	10/80	IV-12	
j26_1	1983		IV-14	Field Hydro
lwq81	03/75	11/80	IV-22	
ch81	1980		IV-30-32	Water Chem
j48_17	1984		IV-14	Field Hydro
j48_14	1984		IV-14	Field Hydro
j26_5	1983		IV-25	Retort Water
j48_13	1984		IV-25	Retort Water
j26_3	1983		IV-27-29	Water Chemistry
j26_4	1983		IV-27-29	Water Chemistry
j26_6	1983		IV-27-29	Water Chemistry
j16_13	1982		IV-27-29	Water Chemistry

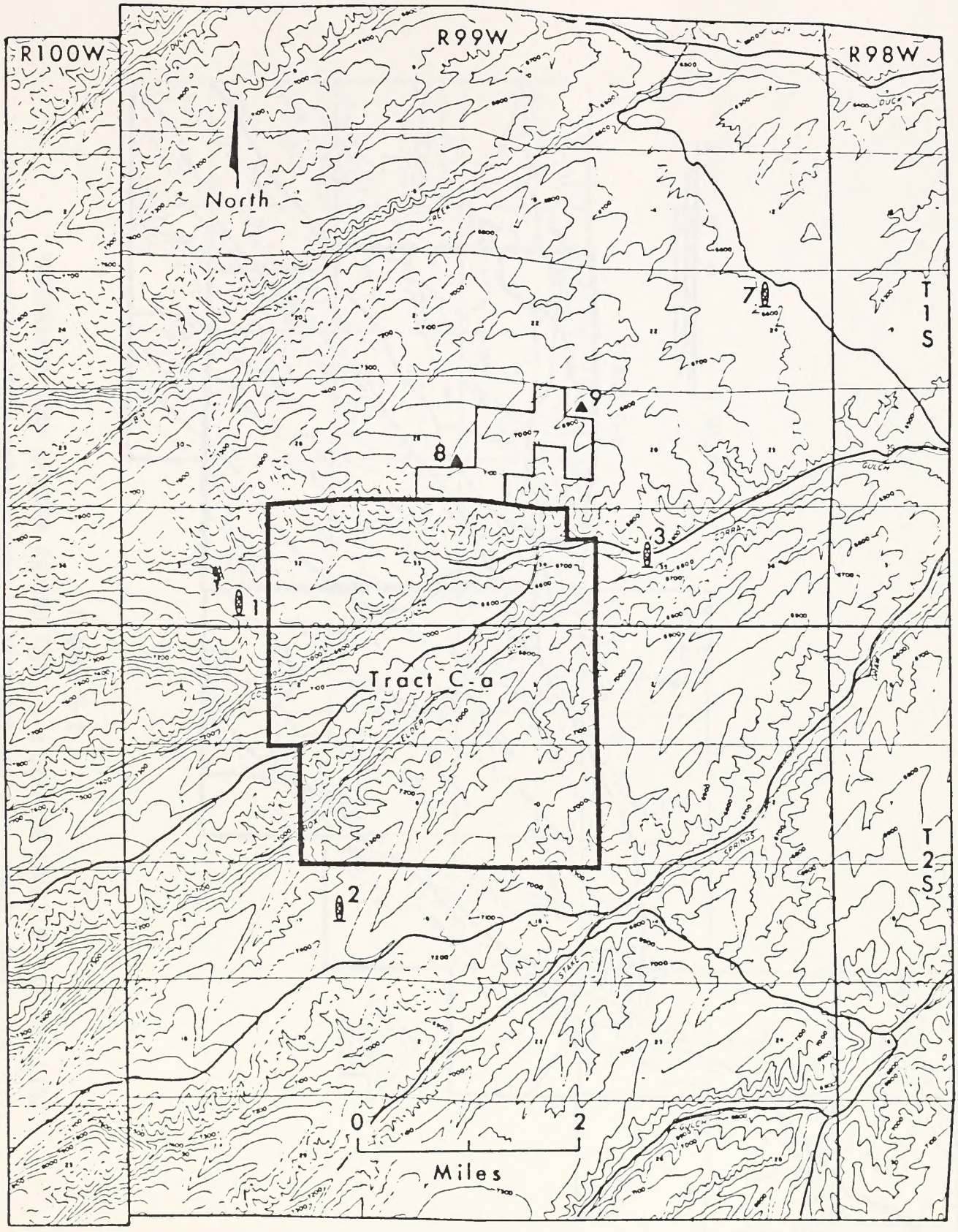
Table 2.IV Cont.

j49_1	1984	IV-27-29	Water Chemistry
j49_2	1984	IV-27-29	Water Chemistry
j16_1	1982	IV-26	
j48_9	1984	IV-33	USGS Water Q
j48_8	1984	IV-34	USGS Water Chemistry
j26_2	1983	IV-19	Oper. Data

Table 2.V

Tract: C-a
Monitoring Acitvity: SPECIAL STUDIES
Inventory Date: 5/19/81

OSO File Name	Initial Date (mo/yr)	Final Date (mo/yr)	Page No.	Data Description
g76778	06/76	09/78	V-2	Revegetation
rvg79	08/79	08/79	V-3	Revegetation
rvg379	08/79	08/79	V-5	Revegetation
rvg180	08/80	08/80	V-4	Revegetation
rvg280	08/80		V-4	Revegetation
rclm81	08/81		V-7	Reclamation
rvg81	07/81		V-1	Revegatation
rvg380	08/80		V-4	Revegetation
shb381	10/81		V-6	Shrubs
vg8081	/80	/81	V-8	Revegetation
j26_10	1976	1983	V-9	Cover R1
j26_11	1976	1983	V-9	Cover R2
j26_12	1976	1983	V-10	Cover R3
j26_13			V-11	soil-moisture
j26_14			V-12	bench-test-moist.
j26_15			V-13	soil-moisture
j26_16			V-14	bench-test-moist.
j16.28			V-15	R3 conductivity
j16.29			V-16	reveg R3 plant
j16.31	1982		V-17	reclam success
j16.26	1979	1982	V-18	biomass R2
j16.20	1978	1981	V-19	range prod.
j16.30	1982		V-20	habitat mod
j16.22	1978	1981	V-21	reveg biomass R1 &
j16.24	1978	1981	V-21	R2
rvg80	1980		V-27	revegetation
j48_10	1984		V-24	R3 soil noist.
j48_5	1984		V-26	bench test
j48_7	1984		V-25	bench test
j48_15	1984		V-22	R1 cover
j48_12	1984		V-22	R2 cover
j48_11	1984		V-23	R3 cover



Meteorological & Air Quality Monitoring Sites

▲ Hi-Vol Monitoring Sites

Figure 2-1
Meteorological & Air Quality Monitoring Sites

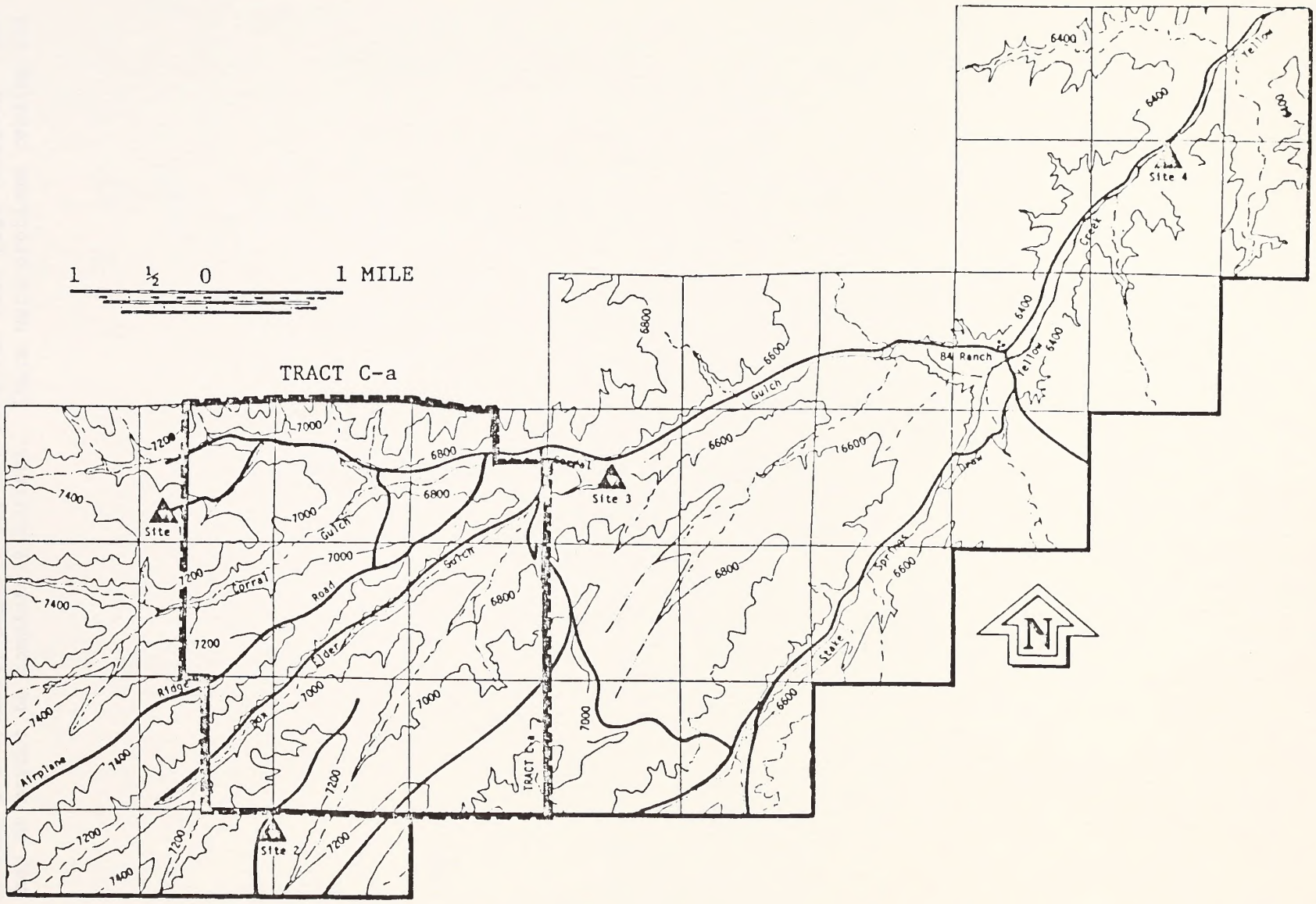


Figure 8-2-1

TOPOGRAPHIC MAP OF AREA AROUND TRACT C-a SHOWING LOCATIONS OF BASELINE METEOROLOGICAL AND AIR QUALITY STATIONS AND RECOMMENDED MONITORING SITE

The following C-a formats, pages 1-11, are from the last tape received. The format may or maynot be completely correct. There were problems reading the files.

Ca Format

Tract: C-a
Monitoring Activity:Water
Format:J60_2
Period Covered:1981-1986

PARAMETER	COL	FORMAT	UNITS
TYPE	1	A4	
STAT	5	A10	
DATE	15	A6	
WLELEV	24	F6.1	
FLOW	30	I6	
ALK	36	I4	
TEMP	40	F3.1	
pH	43	F3.1	
SP_COND	46	I5	
NH3	51	F3.1	
F	54	F3.1	
S	57	I3	
K	60	I5	
PHE	65	F3.1	
COD	68	I3	
WLDEPTH	71	F5.1	

Ca Format

Tract: C-a
Monitoring Activity: Water Chem
Format: J60_11
Period Covered: 1981-1986

Parameter	Col	Format	Units
DATE	63	A8	
STATION	21	A25	
TEMP	21	F6.1	
ph	33	F6.1	
SPC_COND	45	F6.1	
Ca	21	F6.1	
Mg	35	F6.0	
Na	49	F6.0	
K	63	F6.2	
HCO3	21	F6.2	
CO3	35	F6.2	
OH	49	F6.2	
SO4	63	F6.0	
Cl	21	F6.2	
TSS	49	F6.0	
TCN	56	F6.2	
TSO4	63	F6.2	
TDS	21	F6.0	
ALK	35	F6.0	
HARD	56	F6.0	
ORTHOP	63	F6.2	
PO4	21	F6.2	
KJEL	28	F6.1	
NH3	35	F6.2	
NO2	42	F6.3	
NO3	49	F6.3	
F	56	F6.2	
S	63	F6.1	
SO3	69	F6.0	
BR	21	F6.1	
TOC	28	F6.0	
DOC	35	F6.0	
CN	70	F6.3	
PHE	21	F6.2	
OG	28	F6.0	
BOD	35	F6.0	
COD	42	F6.0	

PARAMETER	COL	FORMAT	UNITS
AL	21	F6.1	
SB	27	F6.2	
AS	33	F6.2	
Ba	39	F6.1	
Be	45	F6.2	
Bi	51	F6.2	
B	57	F6.2	
Cd	63	F6.1	
Cr	69	F6.2	
Cu	21	F6.3	
Fe	27	F6.2	
Ga	33	F6.1	
Ge	39	F6.1	
PB	45	F6.3	
Li	51	F6.2	
Mn	57	F6.2	
Hg	63	F6.2	
MOL	69	F6.1	
NI	75	F6.2	
SE	21	F6.2	
SIO2	27	F6.0	
Ag	33	F6.1	
Sr	39	F6.2	
Sn	45	F6.2	
Ti	51	F6.1	
W	57	F6.2	
V	63	F6.1	
Zn	69	F6.2	
Zr	75	F6.0	
ALPHA	33	F6.0	
BETA	45	F6.0	

Ca Formats

Tract: C-a
Monitoring Activity: USGS Field Water Chem
Format: j60_10
Period Covered: 1981 - 1986

Parameter	Col.	Format	Units
stat	1	A3	
date	8	I6	
Qm	14	F6.2	
Thi	20	F6.1	
Tlow	26	F6.1	
Tm	32	F6.1	
Chi	38	F6.1	
Clow	44	F6.1	
Cm	50	F6.1	
Ssm	56	F6.2	
Slm	62	F6.2	

Ca Formats

Tract: C-a
Monitoring Activity: USGS Field Water Quality
Format: j60_9
Period Covered: 1981 - 1986

Parameter	Col.	Format	Units
stat	1	A3	
date	8	I6	
flow	14	F6.2	
turb 70	20	F6.2	
turb 76	26	F6.2	
color	32	I6	
Sp_cond	38	I6	
DO	44	I6	
BOD	50	I6	
COD	56	I6	
Ph	60	I6	
CO_2	68	I6	
Alk	74	I6	

Parameter	Col.	Format	Units
HCO3	1	I6	
CO3	7	I6	
Oil550	13	I6	
Oil556	19	I6	
N_TOT	25	I6	
N_DIS	31	I6	
TORG_N	37	I6	
ORG_N	43	I6	
NH3_N	49	I6	
TNH3_N	55	I6	
NO2_DIS	61	I6	
NO3_DIS	67	I6	
KJEL623	73	I6	
CC2	80	I6	

Parameter	Col.	Format	Units
KJEL625	1	I6	
TNO2NO3	7	I6	
NO2NO3	13	I6	
TPO4	19	I6	
O_PO4	25	I6	
TOT_P	31	I6	
DIS_P	37	I6	
DORTHOP	43	I6	
TOC	49	I6	
DOC	55	I6	
SUSP_OC	61	I6	
CYANIDE	67	I6	
THS	73	I6	
CC3	80	I1	

Parameter	Col.	Format	Units
HS	1	I6	
T_Hard	7	I6	
NC_Hard	13	I6	
Ca	19	I6	
Ma	25	I6	
Na	31	I6	
SAR	37	I6	
Per_Na	43	I6	
Na_K	49	I6	
K	55	I6	
Cl	61	I6	
SO4	67	I6	
F	73	I6	
CC4	80	I1	

Parameter	Col.	Format	Units
SIO4	1	I6	
As	7	I6	
Ba	13	I6	
Be	19	I6	
Bi	25	I6	
B	31	I6	
CD	37	I6	
Cr	43	I6	
Cu	49	I6	
Fe	55	I6	
Pb	61	I6	
Mn	67	I6	
Mol	73	I6	
CC5	80	I1	

Parameter	Col.	Format	Units
Ni	1	I6	
Ag	7	I6	
V	13	I6	
Zn	19	I6	
Sn	25	I6	
Al	31	I6	
Ga	37	I6	
Ge	43	I6	
Li	49	I6	
Se	55	I6	
Ti	61	I6	
Zr	67	I6	
Odor	73	I6	
CC6	80	I1	

Parameter	Col.	Format	Units
T_COLI	1	I6	
F_COLI	7	I6	
Phenol	13	I6	
PCB	19	I6	
TDS	25	I6	
TDS2	31	I6	

Parameter	Col.	Format	Units
TDS3	37	I6	
NH3	43	I6	
NO3	49	I6	
NO2	55	I6	
Br	61	I6	
Hg	67	I6	
Sr	73	I6	
CC7	80	I1	

Ca Formats

Tract: C-a
Monitoring Activity: Soil Moisture
Format: j60_8
Period Covered: 1986

Parameter	Col.	Format	Units
date	1	A6	
fence	7	I1	
soil	8	I1	
slope	9	I1	
row	10	A1	
num	11	A1	
top	16	F5.1	
mid	21	F5.1	
lot	26	F5.1	

Tract: C-a
Monitoring Activity: Bench Test Plant Height & Dia.
Format: j60_7
Period Covered: 1986

Parameter	Col.	Format	Units
date	1	A6	
fence	7	I1	
soil	8	I1	
slope	9	I1	
row	10	A1	
plt_no	11	I2	
species	13	A6	
gr_form	19	A1	
status	20	A1	
ph	21	I4	
pd	25	I5	

Ca Formats

Tract: C-a
Monitoring Activity: R3 Soil Moisture Study
Format: j60_6
Period Covered: 1986

Parameter	Col.	Format	Units
site	1	A2	
plot	4	I2	
subs	7	I1	
seed	8	I1	
mulch	9	I1	
date	11	I6	
top	20	F5.1	
mid	25	F5.1	
bot	30	F5.1	

Ca Formats

Tract: C-a
Monitoring Activity: Exp. Reveg Site R3
Format: j60_5
Period Covered: 1986

Parameter	Col.	Format	Units
plot	5	I2	
substrate	7	I1	
seeding	8	I1	
mulch	9	I1	
date	11	I6	
species	20	A6	
gr_form	26	A1	
sps_type	27	A1	
cover 1	28	I3	
cover 2	34	I3	
cover 3	40	I3	

Ca Formats

Tract: C-a
Monitoring Activity: Exp. Reveg Site R1 & R2
Format: j60_3, j60_4
Period Covered: 1986 1986

Parameter	Col.	Format	Units
site	2	I1	
block	4	I1	
plot	5	I2	
mulch	9	I1	
fertilizer	10	II	
date	11	I6	
species	20	A6	
gr_form	26	A1	
cover 1	28	I3	
cover 2	34	I3	
cover 3	40	I3	
cover 4	46	I3	

Ca Formats

Tract: C-a
Monitoring Activity: Met
Format: j60_1
Period Covered: 1986

Parameter	Col.	Format	Units
yr	1	I2	
MN	3	I2	
DY	5	I2	
HR	7	I2	
WSI-10m	10	F5.1	
WDI-10m	16	I3	
WDS1-10m	20	I3	
WS2-60m	25	F5.1	
WD2-60m	31	I3	
WDS2-60m	35	I3	
T10	40	F5.1	
T60	46	F5.1	
DT	52	F5.1	
SR	58	F6.2	
PCP	65	F5.2	

Ca Formats

Tract: C-a
Monitoring Activity: Water
Format: j60_2
Period Covered: 1981 - 1986

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Formats: aqmb1, aqmb12, aqmb13
Period Covered: 02/01/75 - 01/31/77

Parameter	Length	Format	Units
Record 1			
space	1	1x	na
mo	2	i2	-
da	2	i2	-
yr	2	i2	-
space	1	1x	na
hr	2	i2	-
space	1	1x	na
latitude	8	f8.4	degrees
space	1	1x	na
longitude	8	f8.4	degrees
space	1	1x	na
wss110 (wind speed)	6	f6.2	mph
space	1	1x	na
wds (wind direction)	6	f6.2	degrees
space	1	1x	na
ats110 (air temperature)	6	f6.2	degrees.celsius
space	1	1x	na
rhs110 (relative humidity)	6	f6.2	percent
space	1	1x	na
wss130	6	f6.2	mph
space	1	1x	na
wds130	6	f6.2	degrees
space	1	1x	na
ats	6	f6.2	degrees.celsius
space	1	1x	na
wss160	6	f6.2	mph
space	1	1x	na
wds	6	f6.2	degrees
space	1	1x	na
dts160 (delta temp.)	6	f6.2	na
space	1	1x	na
prcs102 (precipitation)	6	f6.2	inches.of.water
space	1	1x	na
sis102 (solar insolation)	6	f6.2	langleys
space	1	1x	na
SO2s103	6	f6.3	ppm
space	1	1x	na
H2S103	6	f6.3	ppm
space	1	1x	na
THCs103 (Total Hydrocbns)	6	f6.3	ppm
space	1	1x	na

Continued on next page

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Formats: aqmb1, aqmb12, aqmb13 (continued from previous page)
Period Covered: 02/01/75 - 01/31/77

Parameter	Length	Format	Units
CH4s103	6	f6.3	ppm
space	1	1x	na
NOxs103	6	f6.3	ppm
space	1	1x	na
NOs103	6	f6.3	ppm
space	1	1x	na
COs103	6	f6.3	ppm
space	1	1x	na
03s103	6	f6.3	ppm

110 - site 1 - 10 meters
130 - site 1 - 30 meters
160 - site 1 - 60 meters
102 - site 1 - 2 meters
103 - site 1 - 3 meters

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Formats: aqmb1, aqmb12, aqmb13
Period Covered: 02/01/75 - 01/31/77

Parameter	Length	Format	Units
Record 2			
space	1	1x	na
mo	2	i2	-
da	2	i2	-
yr	2	i2	-
space	1	1x	na
hr	2	i2	-
space	1	1x	na
latitude	8	f8.4	degrees
space	1	1x	na
longitude	8	f8.4	na
space	1	1x	na
wss210	6	f6.2	mph
space	1	1x	na
wds	6	f6.2	degrees
space	1	1x	na
ats210	6	f6.2	degrees.celsius
space	1	1x	na
prcs203	6	f6.2	inches.of.water
space	1	1x	na
SO2s203	6	f6.3	ppm
space	1	1x	na
H2Ss203	6	f6.3	ppm
space	1	1x	na
THCs203	6	f6.3	ppm
space	1	1x	na
CH4s203	6	f6.3	ppm

210 - site 2 - 10 meters
203 - site 2 - 3 meters

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Formats: aqmb1, aqmb12, aqmb13
Period Covered: 02/01/75 - 01/31/77

Parameter	Length	Format	Units
Record 3			
space	1	1x	na
mo	2	i2	-
da	2	i2	-
yr	2	i2	-
space	1	1x	na
hr	2	i2	-
space	1	1x	na
latitude	8	f8.4	degrees
space	1	1x	na
longitude	8	f8.4	degrees
space	1	1x	na
wss310	6	f6.2	mph
space	1	1x	na
wds310	6	f6.2	degrees
space	1	1x	na
ats310	6	f6.2	degrees.celsius
space	1	1x	na
prcs302	6	f6.2	inches.of.water
space	1	1x	na
SO2s303	6	f6.3	ppm
space	1	1x	na
H2Ss303	6	f6.3	ppm
space	1	1x	na
THCs303	6	f6.3	ppm
space	1	1x	na
CH4s303	6	f6.3	ppm
space	1	1x	na
NOxs303	6	f6.3	ppm
space	1	1x	na
NOs303	6	f6.3	ppm
space	1	1x	na
COs303	6	f6.3	ppm
space	1	1x	na
03s303	6	f6.3	ppm

310 - site 3 - 10 meters
302 - site 3 - 2 meters
303 - site 3 - 3 meters

Ca_md Formats

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Formats: aqmb1, aqmb12, aqmb13
Period Covered: 02/01/75 - 01/31/77

Parameter	Length	Format	Units
Record 4			
space	1	1x	na
mo	2	i2	-
da	2	i2	-
yr	2	i2	-
space	1	1x	na
hr	2	i2	-
space	1	1x	na
latitude	8	f8.4	degrees
space	1	1x	na
longitude	8	f8.4	degrees
space	1	1x	na
wss410	6	f6.2	mph
space	1	1x	na
wds410	6	f6.2	degrees
space	1	1x	na
ats410	6	f6.2	degrees.celsius
space	1	1x	na
prcs402	6	f6.2	inches.of.water
space	1	1x	-
SO2s403	6	f6.3	ppm
space	1	1x	-
H2Ss403	6	f6.3	ppm
space	1	1x	-
THCs403	6	f6.3	ppm
space	1	1x	-
CH4s403	6	f6.3	ppm

410 - site 4 - 10 meters
402 - site 4 - 2 meters
403 - site 4 - 3 meters

Ca_md Formats

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Format: nusol
Period Covered: 02/01/77 - 08/31/77

Parameter	Length	Format	Units
date	6	3a2	mmddyy
space	1	1x	na
hour	2	i2	hh
sulfur.dioxide	8	f8.2	ppm
total.hydro-carbons	8	f8.2	ppm
nitric.oxide	8	f8.3	ppm
carbon.monoxide	8	f8.1	ppm
hydrogen.sulfide	8	f8.2	ppm
methane	8	f8.2	ppm
nitrogen.oxides	8	f8.3	ppm
ozone.tower.1	8	f8.3	ppm
10.meter.wind.speed	7	f7.1	mph
10.meter.wind.direction	5	i5	degrees
30.meter.wind.speed	7	f7.1	mph
30.meter.wind.direction	5	i5	degrees
60.meter.wind.speed	7	f7.1	mph
60.meter.wind.direction	5	i5	degrees
10.meter.temperature	7	f7.1	centigrade
30.meter.temperature	7	f7.2	centigrade
60.meter.temperature	7	f7.1	centigrade
relative.humidity	6	i6	percent
delta.t(60-10)	7	f7.1	centigrade
precipitation	7	f7.2	inches
solar.radiation	7	f7.2	langleys/minute

* Missing data is coded as 999's.

Site 1.

Ca_md Formats

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Format: nuso2
Period Covered: 9/01/77 - 11/30/77

Parameter	Length	Format	Units
date	6	3a2	mmddyy
space	1	1x	na
hour	2	a2	hh
sulfur.dioxide	8	f8.2	ppm
total.hydro.carbons	8	f8.2	ppm
nitric.oxide	8	f8.3	ppm
carbon.monoxide	8	f8.1	ppm
hydrogen.sulfide	8	f8.2	ppm
methane	8	f8.2	ppm
nitrogen.oxides	8	f8.3	ppm
ozone.tower.1	8	f8.3	ppm
ozone.tower.3	8	f8.3	ppm
10.meter.wind.speed	8	f7.1	mph
10.meter.wind.direction	5	i5	degrees
30.meter.wind.speed	7	f7.1	mph
30.meter.wind.direction	5	i5	degrees
69.meter.wind.speed	7	f7.1	mph
60.meter.wind.direction	5	i5	degrees
10.meter.temperature	8	f7.1	centigrade
30.meter.temperature	8	f7.1	centigrade
60.meter.temperature	8	f7.1	centigrade
relative.humidity	7	i6	percent
delta.t	7	f7.1	centigrade
precipitation	7	f7.2	inches
solar.radiation	7	f7.2	langleys/minute
wind.speed.site.2	7	f7.1	mph
wind.direction.site.1	5	i6	degrees
wind.speed.site.3	7	f7.1	mph
wind.direction.site.3	5	i6	degrees
temperature.tower.2(10.meter)	7	f7.1	centigrade
temperature.tower.3(10.meter)	7	f7.1	centigrade

* Data are taken at two locations at the site. Site 1.
Missing data is coded as 999's

Ca_md Formats

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Format: sar3
Period Covered: 12/1/77 - 05/31/78

Parameter	Length	Format	Units
date	6	3a2	mmddyy
space	1	1x	na
hour	2	a2	hh
sulfur.dioxide.site.1	7	f7.2	ppm
total.hydro.carbons.site.1	7	f7.2	ppm
nitrogen.oxides.site.1	7	f7.3	ppm
carbon.monoxide.site.1	7	f7.1	ppm
hydrogen.sulfide.site.1	7	f7.2	ppm
methane.site.1	7	f7.2	ppm
nitric.oxide.site.1	7	f7.3	ppm
ozone.site.1	7	f7.3	ppm
sulfur.dioxide.site.3	7	f7.2	ppm
hydrogen.sulfide.site.3	7	f7.2	ppm
ozone.site.3	7	f7.3	ppm
10.meter.wind.speed.tower.1	6	f6.1	mph
10.meter.wind.direction.tower.1	4	i4	degrees
60.meter.wind.speed.tower.1	6	f6.1	mph
60.meter.wind.direction.tower.1	4	i4	degrees
10.meter.temperature.tower.1	6	f6.1	centigrade
60.meter.temperature.tower.1	6	f6.1	centigrade
delta.t(60-10).tower.1	6	f6.1	centigrade
relative.humidity	4	i4	percent
precipitation	6	f6.2	inches
solar.radiation	6	f6.2	langleys/minute
10.meter.wind.speed.tower.2	6	f6.1	mph
10.meter.wind.direction.tower.2	4	i4	degrees
ambient.temperature.tower.2	6	f6.1	centigrade
precipitation.tower.2	6	f6.2	inches
10.meter.wind.speed.tower.3	6	f6.1	mph
10.meter.wind.direction.tower.3	4	i4	degrees
ambient.temperature.tower.3	6	f6.1	centigrade
precipitation.tower.3	6	f6.2	inches

* 99.9 or field length less one for no value given or recorded.

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Format: armtl3
Period Covered: 6/01/78 - 11/30/78

Parameter	Length	Format	Units
date	6	3a2	mmddyy
space	1	1x	na
hour	2	a2	hh
sulfur.dioxide.site.1	7	f7.2	ppm
nitrogen.oxides.site.1	7	f7.3	ppm
carbon.monoxide.site.1	7	f7.1	ppm
hydrogen.sulfide.site.1	7	f7.3	ppm
nitric.oxide.site.1	7	f7.3	ppm
ozone.site.1	7	f7.3	ppm
sulfur.dioxide.site.3	7	f7.2	ppm
hydrogen.sulfide.site.3	7	f7.2	ppm
ozone.site.3	7	f7.3	ppm
10.meter.wind.speed.tower.1	6	f6.1	mph
10.meter.wind.direction.tower.1	4	i4	degrees
60.meter.wind.speed.tower.1	6	f6.1	mph
60.meter.wind.direction.tower.1	4	i4	degrees
10.meter.temperature.tower.1	6	f6.1	centigrade
60.meter.temperature.tower.1	6	f6.1	centigrade
delta.t(60-10)	6	f6.2	centigrade
dew.point	6	f6.2	centigrade
solar.radiation.tower.1	6	f6.2	langleys/minute
10.meter.wind.speed.tower.2	6	f6.1	mph
10.meter.wind.direction.tower.2	4	i4	degrees
10.meter.amb.temperature	6	f6.1	centigrade
10.meter.wind.speed.tower.3	6	f6.1	mph
10.meter.wind.direction.tower.3	4	i4	degrees
10.meter.amb.temperature.tower.3	6	f6.1	centigrade
unknown	7	f7.2	-
unknown	7	f7.2	-

Data recorded in Vol. 2, Year-end Report, Dec77-Nov78
No data designated by 99.99 or one less than size designated.

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Format: aqmt80
Period Covered: 6/80 - 11/80

Parameter	Length	Format	Units
Record 1 for Site 1			
space	1	1x	na
date.sampled	6	a6	mmddyy
space	1	1x	na
hour.sampled	2	a2	-
latitude	9	f9.4	degrees.latitude
longitude	9	f9.4	degrees.longitude
space	1	1x	na
sulfur.dioxide	5	f5.3	ppm
nitrogen.oxides	6	f6.3	ppm
carbon.monoxide	6	f6.1	ppm
hydrogen-sulfide	6	f6.3	ppm
nitric oxide	6	f6.3	ppm
ozone	6	f6.3	ppm
wind.speed(10.meter)	5	f5.1	mph
space	1	1x	na
wind.direction(10.meter)	3	i3	degrees
wind.speed(60.meter)	5	f5.1	mph
space	1	1x	na
wind.direction	3	i3	degrees
temperature(10.meter)	5	f5.1	degrees.c
temperature(60.meter)	5	f5.1	degrees.c
temperature.differential(60-10)	5	f5.1	degrees.c
dew.point	5	f5.1	degrees.c
solar.radiation	5	f5.2	langleys/minute
Record 2 for Site 2			
space	1	1x	na
date.sampled	6	a6	mmddyy
space	1	1x	na
hour.sampled	2	a2	-
latitude	9	f9.4	degrees.latitude
longitude	9	f9.4	degrees.longitude
space	1	1x	na
wind.speed(10.meter)	5	f5.1	mph
space	1	1x	na
wind.direction(10.meter)	4	i4	degrees
space	1	1x	na
temperature(10.meter)	6	f6.1	degrees.c

Continued on next page

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Format: aqmt80 (continued from previous page)
Period Covered: 6/80 - 11/80

Parameter	Length	Format	Units
Record 3 for Site 3			
space	1	1x	na
date.sampled	6	a6	mmddyy
space	1	1x	na
hour.sampled	2	a2	-
latitude	9	f9.4	degrees.latitude
longitude	9	f9.4	degrees.longitude
space	1	1x	na
sulfur.dioxide	6	f6.3	ppm
hydrogen.sulfide	6	f6.3	ppm
ozone	6	f6.3	ppm
nitrogen.oxides	6	f6.3	ppm
nitric.oxide	6	f6.3	ppm
carbon.monoxide	6	f6.1	ppm
wind.speed(10.meter)	5	f5.1	mph
space	1	1x	na
wind.direction(10.meter)	3	i3	degrees
temperature(10.meter)	5	f5.1	degrees.c

Repeat record 1,2,3 until all the file has been read
Missing data are coded as 999's.

Ca_md Format

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Format: j4A-1, j4B-1
Period Covered: 12/80 - 5/81
6/81 - 12/81

Parameter	Length	Format	Units
space	1	1x	na
date	6	3i2	yymmdd
space	1	1x	na
hour	2	i2	hr
sulfur.dioxide(s1)	7	f7.3	ppm
nitrogen.oxides(s1)	7	f7.3	ppm
carbon.monoxide(s1)	7	f7.1	ppm
hydrogen.sulfide(s1)	8	f7.3	ppm
nitric.oxide(s1)	8	f7.3	ppm
sulfur.dioxide(s3)	8	f7.3	ppm
hydrogen.sulfide(s3)	8	f7.3	ppm
ozone(s3)	8	f7.3	ppm
nitrogen.oxides(s3)	8	f7.3	ppm
nitric.oxide(s3)	8	f7.3	ppm
ozone(s1)	8	f7.3	ppm
carbon.monoxide(s3)	7	f7.1	ppm
wind.speed(t1-10m)	6	f6.1	mph
wind.direction(t1-10m)	4	i4	deg
wind.speed(t1-60m)	6	f6.1	mph
wind.direction(t1-60m)	4	i4	deg
temp(10m)	6	f6.1	deg.C
temp(60m)	6	f6.1	deg.C
delta.T(60-10)	6	f6.1	deg.C
dew.point	6	f6.1	deg.C
solar.radiation	6	f6.2	langleys.min
wind.speed(t2-10m)	6	f6.1	mph
wind.direction	4	i4	deg
ambient.temp(t1-10m)	6	f6.1	deg.C
wind.speed(t3-10m)	6	f6.1	mph
wind.direction(t3-10m)	4	i4	deg
ambient.temp(t3-10m)	6	f6.1	deg.C

Ca_md Format

Tract: C-a
Monitoring Activity: PRECIPITATION DATA
Format: precbl
Period Covered: 02/02/75 - 11/26/76

Parameter	Length	Format	Units
space	1	1x	na
date	8	a8	mmddyy
space	1	1x	na
site-1	5	a5	inches.of.water
space	1	1x	na
site-1(weighing.gage)	5	a5	inches.of.water
space	1	1x	na
site-2	5	a5	inches.of.water
space	1	1x	na
site-2(weighing.gage)	5	a5	inches.of.water
space	1	1x	na
site-3	5	a5	inches.of.water
space	1	1x	na
site-4	5	a5	inches.of.water

When sites 1 & 2 have a weighing gage value the first value is
by tipping bucket otherwise method is not stated.

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Format: prc801
prc802
prc803
Period Covered: 06/80 - 11/80

Parameter	Length	Format	Units
Site 1			
space	1	1x	na
date	13	a13	mmddyy-mmddyy
space	1	1x	na
weather.measure.tipping.bucket.gauge	4	f4.2	inches
space	1	1x	na
belfort.weighing.bucket.gauge	4	f4.2	inches
space	1	1x	na
wedge.gauge	4	f4.2	inches

Dates not listed had no precipitation
Belfort weighing bucket gauge not installed at site 3

Ca_md Formats

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Format: prc780, prc81
Period Covered: 09/03/77 - 11/24/80
12/80 - 12/81

Parameter	Length	Format	Units
space	1	1x	na
site.no	6	a6	na
space	1	1x	na
date	17	a17	mmddyy-mmddyy
space	1	1x	na
tipping.bucket.gauge	5	a5	inches
space	1	1x	na
belfort.weighing.gauge	5	a5	inches
space	1	1x	na
wedge.gauge	5	a5	inches

* After inches measured means estimate after guage was spilled.
M means missing data
T means trace only
Missing data is 99.9 in 80-81 file
100.0 or rounded up

Ca_md Formats

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Format: prc123
Period Covered: 12/79 - 5/80

Parameter	Length	Format	Units
space	1	1x	na
station	5	a5	-
space	2	2x	na
start.date	6	a6	mmddyy
space	2	2x	na
end.date	6	a6	mmddyy
space	2	2x	na
tipping.bucket.gauge	5	F5.2	inches
space	2	2x	na
belfort.weighing.gauge	5	F5.2	inches
space	2	2x	na
wedge.gauge	5	F5.2	inches

Tract: C-a
Monitoring Activity: Air Quality and Meteorology
Format: prt780, prt81, partbl
Period Covered: 9/77 - 11/80
12/80 - 12/81
3/75 - 11/76

Parameter	Length	Format	Units
space	1	1x	na
date	8	a8	mmddyy
space	1	1x	na
s1	9	f9.1	micrograms.cubic.meter
s1e	9	f9.1	micrograms.cubic.meter
s2	9	f9.1	micrograms.cubic.meter
s3	9	f9.1	micrograms.cubic.meter
s3c	9	f9.1	micrograms.cubic.meter
s4	9	f9.1	micrograms.cubic.meter
s6	9	f9.1	micrograms.cubic.meter

Missing data is coded 99.9

Tract: C-a
Monitoring Activity: Meteorological Data Site 1 (10,60 M Tower)
Format: j26_17
Period Cover: 1977 - 1983

Parameter	Col.	Format	Units
yr	1	I2	
mo	3	I2	
da	5	I2	
hr	7	I2	
WS10	10	F5.1	mph
WD10	16	I3	degrees
SD10(standard dev.)	20	I3	degrees
WS60	25	F5.1	mph
Wd60	31	I3	degrees
SD60	35	I3	degrees
T10	40	F5.1	centigrade
T60	46	F5.1	centigrade
DT (60-10)	52	F5.1	centigrade
solar radiation	58	F6.2	Langleys/min
precipitation	65	F5.2	inches
relative humidity	70	I5	%

Ca_md Formats

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Formats: dv9172
Period Covered: 6/3/79-11/30/79

Parameter	Length	Format	Units
space	1	1x	na
date	8	a8	yr/mo/da
space	2	2x	na
site-1	4	i4	micro.grams/cubic.meter
space	2	2x	na
site_2	4	i4	micro.grams/cubic.meter
space	2	2x	na
site_3	4	i4	micro.grams/cubic.meter

Ca_md Formats

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Formats: hiv79
Period Covered: 12/79 - 5/80

Parameter	Length	Format	Units
space	1	1x	na
date	8	a8	yr/mo/da
space	2	2x	na
site_1	4	i4	micro.grams/cubic.meter
space	2	2x	na
site_2	4	i4	micro.grams/cubic.meter
space	2	2x	na
site_3	4	i4	micro.grams/cubic.meter

Tract: C-a
Monitoring Activity: AIR QUALITY and METEOROLOGY
Format: part80
Period Covered: 06/03/80 - 11/30/80

Parameter	Length	Format	Units
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
site.1	3	a3	ug/m3
space	1	1x	na
site.2	3	a3	ug/m3
space	1	1x	na
site.3	3	a3	ug/m3
space	1	1x	na
site.3c	3	a3	ug/m3

Data not given designated by --

Tract: C-a
Monitoring Activity: Air Quality Site 1 (6 parameters)
Format: j26_18
Period Covered:

Parameter	Col.	Format	Units
yr	1	I2	
mo	3	I2	
da	5	I2	
hr	7	I2	
SO_2	15	F6.3	ppm
H_2S	25	F6.3	ppm
No	35	F6.3	ppm
NOX	45	F6.3	ppm
03	55	F6.3	ppm
CO	65	F6.3	ppm

Tract: C-a
Monitoring Activity: Air Quality
Format: jl6.32, jl6.34
Period Covered: 1/82 - 6/82, 7/82 - 12/82

Parameters	Col.	Format	Units
date	7	3I2	yr-mo-da
hour	13	I2	1-24 hrs.
site 1 SO_2	15	F6.3	ppm
site 1 H_2S	21	F6.3	ppm
site 1 NO	27	F6.3	ppm
site 1 NO_x	33	F6.3	ppm
site 1 O_3	39	F6.3	ppm
site 1 CO	45	F6.3	ppm
site 3 SO_2	51	F6.3	ppm
site 3 H_2S	57	F6.3	ppm
site 3 NO	63	F6.3	ppm
site 3 NO_x	69	F6.3	ppm
site 3 O_3	75	F6.3	ppm
site 3 CO	81	F6.3	ppm

jkc016.34 only includes site 1 data

Tract: C-a
Monitoring Activity: Meteorology
Format: j16.33, j16.35
Period Covered: 1/82 - 6/82, 7/82 - 12/82

Parameters	Col.	Format	Units
date	7	3I2	yr-mo-da
hour	13	I2.	1-24
WS11	15	F5.1	mph
WD11	20	I3	degrees
SD11	23	I3	
WS16	26	F5.1	mph
WD16	31	I3	degrees
SD16	34	I3	
T11	37	F5.1	degrees C
T16	42	F5.1	degrees C
DT	47	F5.1	degrees C
DP	52	F5.1	degrees C
SR	58	F5.2	Langleys/min
P1	63	F5.2	
WS2	68	F5.1	mph
WD2	73	I3	degrees
SD2	76	I3	
T2	79	F5.1	degrees C
P2	84	F5.2	
WS3	89	F5.1	mph
WD3	94	I3	degrees
SD3	97	I3	
T3	100	F5.1	degrees C
P3	105	F5.1	

The last 5 values are not found in jkc016.35

C-a Format

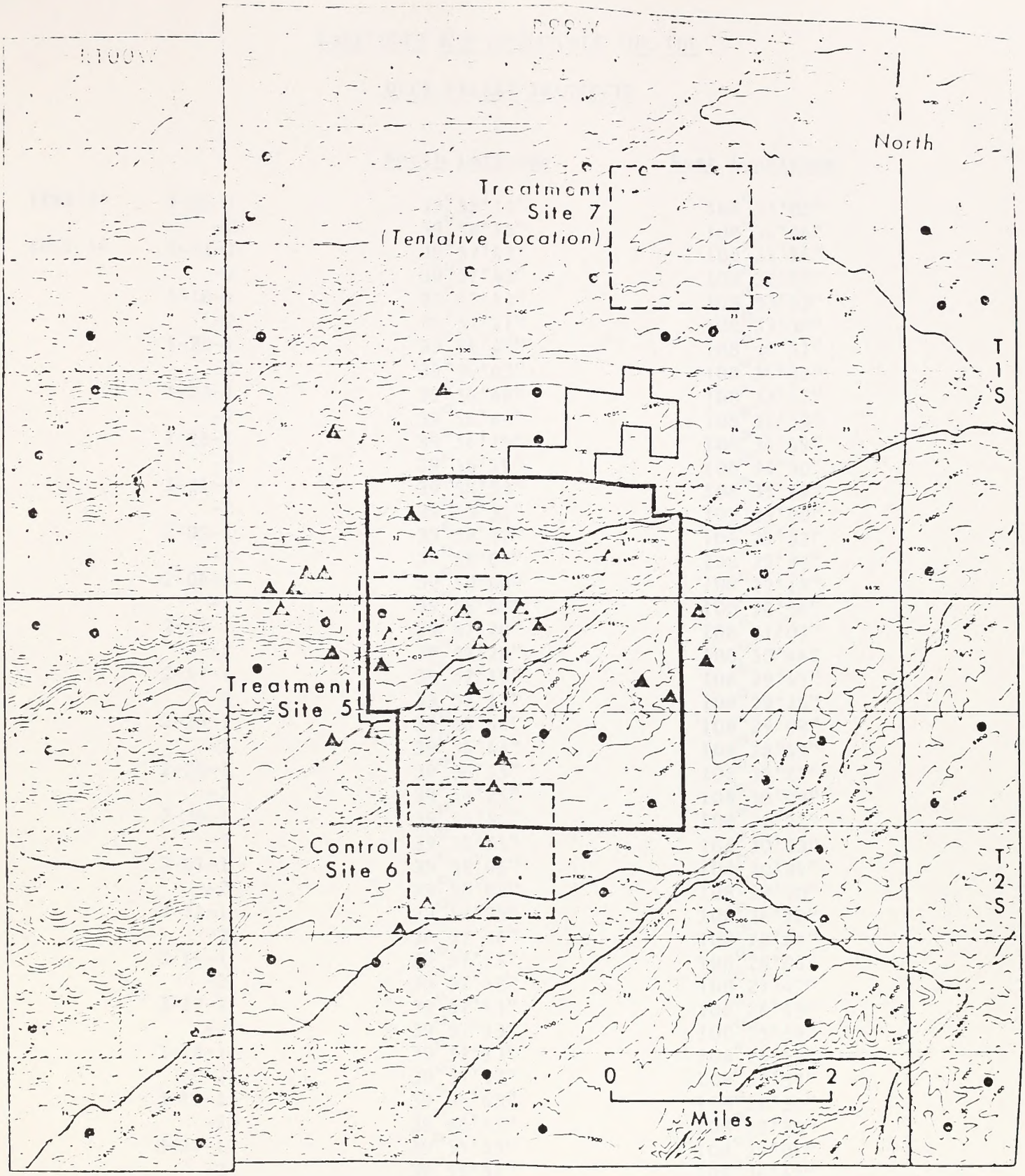
Tract: C-a
Monitoring Activity: Air Quality
Format: j48_4
Period Covered: 1984

Parameters	Col.	Format	Units
date	1	3I2	yr-mo-da
hours	7	I2	1-24 hrs.
SO2	9	F6.3	ppm
H2S	15	F6.3	ppm
NO	21	F6.3	ppm
NOX	27	F6.3	ppm
O3	33	F6.3	ppm
CO	39	F6.2	ppm

C-a Format

Tract: C-a
Monitoring Activity: Met Data
Format: j48_6
Period Covered: 1984

Parameters	Col.	Format	Units
date		3I2	yr-mo-da
WS11 10m		F5.1	mph
WD11 10m		I3	degrees
SD11 10m		I3	
WS16 60m		F5.1	mph
SD16 60m		I3	degrees
T10 10m		F5.1	degrees C
T60 60m		F5.1	degrees C
DT 60-10m		F5.1	
SR solar radiation		F6.2	Langleys/m
PPT precip		F5.2	



- Mule Deer Pellet Group Sample Unit
- Range-Browse, Productivity & Utilization Study Site
- Intensive Study Sites

Figure 4-1
Terrestrial Ecology Monitoring Sites

LATITUDES AND LONGITUDES FOR THE

DEER PELLET TRANSECTS

		North Latitude	West Longitude
(EST.)*	1-05-1	39°58'15"	108°33'05"
	-2	39°58'15"	108°32'46"
(EST.)*	1-11-1	39°57'43"	108°33'16"
	-2	39°57'43"	108°32'57"
	1-16-1	39°57'11"	108°33'53"
	-2	39°57'11"	108°33'34"
	1-20-1	39°56'45"	108°34'51"
	-2	39°56'45"	108°34'32"
	1-23-1	39°56'49"	108°33'12"
	-2	39°56'49"	108°32'53"
	1-26-1	39°56'19"	108°34'49"
	-2	39°56'19"	108°34'30"
	1-31-2	39°55'53"	108°35'19"
	-2	39°55'53"	108°35'00"
	2-05-1	39°58'12"	108°29'52"
	-2	39°58'09"	108°29'33"
	2-06-1	39°58'08"	108°29'15"
	-2	39°58'08"	108°28'56"
	2-15-1	39°57'20"	108°31'03"
	-2	39°57'20"	108°30'44"
	2-17-1	39°57'19"	108°29'45"
	-2	39°57'17"	108°29'26"
	2-24-1	39°56'44"	108°29'08"
	-2	39°56'44"	108°28'49"
	2-28-1	39°56'25"	108°30'22"
	-2	39°56'25"	108°30'03"
	2-34-1	39°55'56"	108°30'22"
	-2	39°55'56"	108°30'03"
	3-01-1	39°58'06"	108°30'39"
	-2	39°58'06"	108°28'20"
	3-11-1	39°57'38"	108°26'28"
	-2	39°57'38"	108°26'09"
	3-14-1	39°57'12"	108°28'06"
	-2	39°57'12"	108°27'47"
	3-17-1	39°57'13"	108°26'18"
	-2	39°57'13"	108°25'59"
	3-18-1	39°57'13"	108°25'56"
	-2	39°57'13"	108°25'37"
	3-19-1	39°56'43"	108°28'39"
	-2	39°56'43"	108°28'20"
	3-34-1	39°55'53"	108°27'01"
	-2	39°55'53"	108°26'42"
	4-01-1	39°55'27"	108°35'24"
	-2	39°55'27"	108°35'05"
	4-08-1	39°55'00"	108°34'57"
	-2	39°55'00"	108°34'38"
	4-13-1	39°54'34"	108°35'24"
	-2	39°54'34"	108°35'05"
	4-14-1	39°54'34"	108°34'49"
	-2	39°54'34"	108°34'30"

*ESTIMATED

	North Latitude	West Longitude
4-18-1	39°54'35"	108°32'31"
-2	39°54'35"	108°32'12"
4-23-1	39°54'09"	108°33'12"
-2	39°54'09"	108°32'53"
4-25-1	39°53'40"	108°35'18"
-2	39°53'40"	108°34'59"
5-08-1	39°55'01"	108°31'26"
-2	39°55'01"	108°31'07"
5-13-1	39°54'35"	108°31'59"
-2	39°54'35"	108°31'40"
5-15-1	39°54'35"	108°31'03"
-2	39°54'35"	108°30'44"
5-27-1	39°53'42"	108°30'49"
-2	39°53'42"	108°30'30"
5-28-1	39°53'42"	108°30'22"
-2	39°53'42"	108°30'03"
5-29-1	39°53'42"	108°29'44"
-2	39°53'42"	108°29'25"
5-36-1	39°53'14"	108°29'20"
-2	39°53'14"	108°29'01"
6-08-1	39°55'01"	108°28'09"
-2	39°55'01"	108°27'50"
6-11-1	39°55'01"	108°26'29"
-2	39°55'01"	108°26'10"
6-14-1	39°54'34"	108°28'17"
-2	39°54'34"	108°27'58"
6-27-1	39°53'42"	108°27'34"
-2	39°53'42"	108°27'15"
6-30-1	39°53'42"	108°25'57"
-2	39°53'42"	108°25'38"
6-32-1	39°53'15"	108°28'07"
-2	39°53'15"	108°27'48"
6-35-1	39°53'15"	108°26'23"
-2	39°53'15"	108°26'04"
7-16-1	39°51'55"	108°33'39"
-2	39°51'55"	108°33'20"
7-17-1	39°51'59"	108°33'03"
-2	39°51'59"	108°32'44"
7-19-1	39°51'29"	108°35'32"
-2	39°51'29"	108°35'13"
7-22-1	39°51'29"	108°33'49"
-2	39°51'29"	108°33'30"
7-28-1	39°51'03"	108°33'49"
-2	39°51'03"	108°33'30"
7-32-1	39°50'36"	108°35'00"
-2	39°50'36"	108°34'41"
7-34-1	39°50'36"	108°33'48"
-2	39°50'36"	108°33'29"
8-03-1	39°52'51"	108°30'53"
-2	39°52'49"	108°30'34"
8-05-1	39°52'49"	108°29'52"
-2	39°52'51"	108°29'33"

LATITUDES AND LONGITUDES FOR THE DEER PELLET TRANSECTS . . . . . Continued

		North Latitude	West Longitude
	8-11-1	39°52'23"	108°29'48"
	-2	39°52'23"	108°29'29"
	8-13-1	39°51'59"	108°31'58"
	-2	39°51'59"	108°31'40"
	8-14-1	39°51'59"	108°31'37"
	-2	39°51'59"	108°31'18"
	8-27-1	39°51'08"	108°30'58"
	-2	39°51'08"	108°30'39"
	8-34-1	39°50'37"	108°30'22"
	-2	39°50'37"	108°30'03"
	9-03-1	39°52'49"	108°27'39"
	-2	39°52'49"	108°27'20"
	9-07-1	39°52'23"	108°28'33"
	-2	39°52'23"	108°28'14"
(EST.)*	9-09-1	39°52'23"	108°27'30"
	-2	39°52'23"	108°27'11"
(EST.)*	9-15-1	39°51'59"	108°27'35"
	-2	39°51'59"	108°27'16"
(EST.)*	9-21-1	39°51'34"	108°27'39"
	-2	39°51'34"	108°27'20"
(EST.)*	9-30-1	39°51'08"	108°25'57"
	-2	39°51'08"	108°25'38"
(EST.)*	9-35-1	39°50'37"	108°26'23"
	-2	39°50'37"	108°26'04"

* ESTIMATED

LATITUDES AND LONGITUDES FOR THE

SMALL ANIMAL TRANSECT

	North Latitude	West Longitude
PJ 5-A	39°54'28"	108°30'52"
5-B	39°54'28"	108°30'55"
5-C	39°54'27"	108°30'58"
S 5-A	39°54'22"	108°31'26"
5-B	39°54'21"	108°31'29"
5-C	39°54'21"	108°31'32"
PJ 6-A	39°52'54"	108°30'56"
6-B	39°52'53"	108°30'58"
6-C	39°52'51"	108°31'00"
S 6-A	39°52'55"	108°30'28"
6-B	39°52'53"	108°30'29"
6-C	39°52'51"	108°30'31"

LATITUDES AND LONGITUDES FOR THE AVIFAUNA TRANSECTS

	North Latitude	West Longitude
PJ 5-A	39°54'25"	108°31'02"
PJ 5-B	39°54'29"	108°31'03"
S 5-A	39°54'18"	108°31'36"
S 5-B	39°54'22"	108°31'38"
PJ 6-A	39°52'51"	108°30'54"
PJ 6-B	39°52'57"	108°30'58"
S 6-A	39°52'48"	108°30'29"
S 6-B	39°52'51"	108°30'36"

LATITUDES AND LONGITUDES FOR THE PHYTOSOCIOLOGICAL TRANSECTS

		North Latitude	West Longitude
PJ	5-A	39°54'22"	108°30'49"
	5-B	39°54'20"	108°30'47"
	5-C	39°54'28"	108°30'45"
	5-D	39°54'28"	108°30'48"
	5-E	39°54'25"	108°31'12"
PJ	6-A	39°53'10"	108°30'52"
	6-B	39°53'09"	108°30'49"
	6-C	39°53'06"	108°30'53"
	6-D	39°53'07"	108°30'54"
	6-E	39°52'46"	108°31'03"
SB	5-A	39°54'08"	108°31'12"
	5-B	39°54'12"	108°31'22"
	5-C	39°54'09"	108°31'37"
	5-D	39°54'17"	108°31'33"
	5-E	39°54'15"	108°31'48"
SB	6-A	39°53'07"	108°31'08"
	6-B	39°52'46"	108°31'23"
	6-C	39°52'23"	108°30'58"
	6-D	39°52'47"	108°30'35"
	6-E	39°53'01"	108°30'23"

LATITUDES AND LONGITUDES FOR THE RANGE - BROWSE, PRODUCTIVITY AND UTILIZATION TRANSECTS

	North Latitude	West Longitude
MB 01	39°54'58"	108°32'26"
MB 02	39°54'58"	108°32'33"
MB 03	39°54'50"	108°32'39"
MB 04	39°54'51"	108°32'56"
PJ 05	39°54'44"	108°30'14"
PJ 06	39°54'44"	108°32'47"
PJ 07	39°53'46"	108°31'53"
SB 08	39°54'30"	108°30'47"
SB 10	39°54'40"	108°30'54"
PJ 11	39°54'40"	108°30'06"
PJ 12	39°55'05"	108°29'28"
SB 14	39°55'05"	108°30'32"
SB 15	39°54'27"	108°31'44"
PJ 16	39°54'44"	108°28'50"
PJ 17	39°54'13"	108°29'14"
PJ 19	39°53'22"	108°30'42"
SB 20	39°53'33"	108°30'34"
SB 22	39°52'36"	108°31'14"
SB 28	39°54'00"	108°30'53"
SB 30	39°54'04"	108°28'34"
MB 31	39°55'57"	108°32'17"
MB 32	39°54'24"	108°32'22"
MB 33	39°54'16"	108°31'53"
MB 34	39°55'09"	108°31'15"
MB 35	39°55'23"	108°31'18"
MB 36	39°52'57"	108°30'47"
PJ 37	39°56'28"	108°31'10"
SB 38	39°53'42"	108°32'15"
SB 39	39°52'13"	108°31'38"
PJ 40	39°53'46"	108°28'52"

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: fmpd78
Period Covered: 9/14/78-00/00/78

Parameter	Length	Format	Units
space	1	1x	na
station	6	a6	-
space	2	2x	na
latitude	8	f8.4	degrees.latitude
space	2	2x	na
longitude	8	f8.4	degrees.longitude
space	2	2x	na
plot	2	i2	-
space	2	2x	na
elevation	5	i5	ft
space	2	2x	na
aspect	2	a2	-
space	2	2x	na
slope	2	i2	-
space	2	2x	na
vegetation	2	a2	-
space	2	2x	na
date	5	i5	mddyy
space	2	2x	na
no.of.pellet.groups	2	i2	-
space	2	2x	na
season	1	a1	-

Plot size - 4 sq. meters.

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: smpd78
Period Covered: 05/16/78-00/00/78

Parameter	Length	Format	Units
space	1	1x	na
station	6	a6	-
space	2	2x	na
latitude	8	f8.4	degrees.latitude
space	2	2x	na
longitude	8	f8.4	degrees.longitude
space	2	2x	na
plot.number	2	i2	-
space	20	20x	na
date	6	a6	mmddyy
space	2	2x	na
no.of.pellet.groups	2	i2	na
space	2	2x	na
season	1	a1	na

Large skips of space are so that the various files are similar.
Plot - 4 sq. meters.

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: ml79
Period Covered: 05/12/79-05/31/79
09/10/79-09/20/79

Parameter	Length	Format	Units
space	1	1x	na
station	6	a6	-
space	2	2x	na
latitude	8	f8.4	degrees.latitude
space	2	2x	na
longitude	8	f8.4	degrees.longitude
space	2	2x	na
plot	2	i2	-
space	2	2x	na
elevation	5	i5	ft.
space	2	2x	na
slope	2	i2	-
space	2	2x	na
aspect	2	a2	-
space	2	2x	na
type	2	a2	-
space	2	2x	na
date	5	i5	mddyy
space	2	2x	na
number	2	i2	-

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: mlsp80
Period Covered: 5/12/80-5/31/80

Parameter	Length	Format	Units
space	1	1x	na
station	6	a6	-
space	2	2x	na
latitude	8	f8.4	degrees
space	2	2x	na
longitude	8	f8.4	degrees
space	2	2x	na
plot.number	2	i2	-
space	2	2x	na
elevation	5	i5	ft.
space	2	2x	na
slope	2	i2	na
space	1	1x	na
aspect	3	a3	-
space	2	2x	na
habitat	2	a2	-
space	1	1x	na
date	6	a6	mmddyy
space	2	2x	na
pellet/count	2	i2	-

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: fm80
Period Covered: 9/23/80-9/00/80

Parameter	Length	Format	Units
space	1	1x	na
station	6	a6	-
space	1	1x	na
latitude	8	f8.4	degrees.latitude
space	1	1x	na
longitude	8	f8.4	degrees.longitude
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
plot.number	2	i2	-
space	1	1x	na
elevation	4	i4	(feet.above.sea.level)
space	1	1x	na
slope	3	i3	-
space	1	1x	na
aspect	3	a3	-
space	1	1x	na
vegetation.type	2	a2	-
space	1	1x	na
number.of.pellets.counted	2	i2	-

Ca_md Format

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: sfmd81
Period Covered: Spring and Fall 1981

Parameter	Length	Format	Units
space	1	1x	na
station	6	a6	-
space(to.be.consistent)	22	22x	na
plot	2	i2	-
space	2	2x	na
elevation	5	i5	-
space	2	2x	na
slope	2	i2	-
space	2	2x	na
aspect	2	a3	-
space	2	2x	na
vegetation	2	a2	-
space	2	2x	na
date	6	a6	mmddyy
space	2	2x	na
pellet.count	2	i2	-

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: avi79
Period Covered: 06/13/79-06/16/79

Parameter	Length	Format	Units
space	1	1x	na
station	6	a6	-
space	2	2x	na
latitude	8	f8.4	degrees
space	2	2x	na
longitude	8	f8.4	degrees
space	2	2x	na
date	5	a5	mddyy
space	2	2x	na
species	6	a6	-
space	2	2x	na
number.observed	2	i2	-

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
avi80_md format
Period Covered: 6/04/80-6/06/80

Parameter	Length	Format	Units
space	1	1x	na
station	6	a6	-
latitude	9	f9.4	degrees.latitude
longitude	9	f9.4	degrees.longitude
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
species.code	6	a6	-
space	1	1x	na
number.of.birds.observed	3	i3	-
space	1	1x	na
time.transect.was.walked	4	i4	-

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: avi81
Period Covered: 5/28/81

Parameter	Length	Format	Units
space	1	1x	na
station	6	a6	-
space	19	19x	na
date	6	a6	mmddyy
space	1	1x	na
species.code	6	a6	-
space	1	1x	na
number.of.birds.observed	3	i3	-
space	1	1x	na
times.transect.walked	4	i4	-

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: mm79
Period Covered: 06/26/79-06/28/79

Parameter	Length	Format	Units
space	1	1x	na
station	6	a6	-
space	2	2x	na
latitude	8	f8.4	degrees
space	2	2x	na
longitude	8	f8.4	degrees
space	2	2x	na
date	5	a5	mddyy
space	2	2x	na
time	1	a1	-
space	2	2x	na
trap	3	a3	-
space	2	2x	na
species	6	A6	-
space	2	2x	na
identification.number	3	i3	-
space	2	2x	na
number.times.captured	2	a2	-
space	2	2x	na
sex	1	a1	M.or.F
space	2	2x	na
age	1	a1	-
space	2	2x	na
reproductive.status	1	a1	-

0 means no data given on tape.
- given for reproductive.status when not known.
. number times captured (no data) but other data given.

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: sm81
Period Covered: 6/9/81

Parameter	Length	Format	Units
space	1	1x	na
station	6	a6	-
space	21	21x	na
date	6	a6	mmddyy
space	2	2x	na
time	1	a1	-
space	2	2x	na
trap.number	3	a3	-
space	2	2x	na
species.code	6	a6	-
space	2	2x	na
identification.number	3	a3	-
space	2	2x	na
number.times.captured	1	a1	-
space	2	2x	na
sex	1	a1	-
space	2	2x	na
age	1	a1	-
space	2	2x	na
reproductive.status	1	a1	-
space	2	2x	na
recaptured	2	a2	-

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: smam80
Period Covered: 6/11/80-6/13/80

Parameter	Length	Format	Units
space	1	1x	na
station	6	a6	-
space	1	1x	na
latitude	9	f9.4	degrees.latitude
longitude	9	f9.4	degrees.longitude
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
trap	3	a3	-
space	1	1x	na
species.code	6	a6	-
space	1	1x	na
species	3	a3	-
space	1	1x	na
number.times.captured	1	a1	-
space	1	1x	na
sex	1	a1	-
space	1	1x	na
age	1	a1	-
space	1	1x	na
reproductive.status	1	a1	-
space	1	1x	na
recaptured	1	a2	-

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: br7677
Period Covered: 12/06/76-05/07/77

Parameter	Length	Format	Units
space	1	1x	na
station	5	a5	-
space	1	1x	na
latitude	8	f8.4	degrees.latitude
space	1	1x	na
longtidue	8	f8.4	degrees.longitude
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
plant.number	2	i2	-
space	1	1x	na
species.code	6	a6	-
space	1	1x	na
form.class	1	i1	-
space	1	1x	na
age.class	1	a1	-
space	1	1x	na
leader.use	2	i2	-
space	1	1x	na
hedge.classification	1	a1	-
space	1	1x	na
availability	3	i3	-
space	1	1x	na
slope	3	a3	-
space	1	1x	na
aspect	3	a3	-
space	1	1x	na
elevation	5	i5	-

Form class

1-all available, little or no hedging
2-all available, moderate hedging
3-all available, severe hedging
4-partially available, little or no hedging
5-partially available, moderately hedged
6-partially available, severely hedged
7-unavailable
8-dead

Age class

S seedlings, less than 0.3 cm basal diameter
Y young, 0.3 to 0.6 cm basal diameter
M mature, over 0.6 cm basal diameter
D decadent, more than 25% of crown surface dead

Hedging classification

Classification based upon the length of appearance (hedging of the previous year's growth [the two-year-old wood])
1 none too light 2 moderate 3 severe

Availability

Visual estimate of the percent of the plant available to deer as browse, i.e., that portion less than six feet tall.

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: br78, br79
Period Covered: 05/09/78-05/14/78
05/02/79-05/04/79

Parameter	Length	Format	Units
space	1	1x	na
latitude	8	f8.4	degrees.latitude
space	2	2x	na
longitude	8	f8.4	degrees.longitude
space	2	2x	na
date	6	a6	mmddyy
space	2	2x	na
num	3	I 3	-
space	2	2x	na
species	6	a6	-
space	2	2x	na
form.class	6	i6	-(see below)
space	2	2x	na
age.class	6	a6	-(see.below)
space	2	2x	na
leader.use	6	a6	-(see.below)
space	2	2x	na
hedge.classification	6	a6	-(see.below)
space	2	2x	na
availability	6	a6	-(see.below)
space	2	2x	na
elevation	4	a4	ft
space	2	2x	na
slope	3	a3	numeric(has.dashes.when. no.data)
space	2	2x	na
aspect	3	a3	alpha(has dashes when no data or not 3 alpha direction is given)

Form class

1-all available, little or no hedging
2-all available, moderate hedging
3-all available, severe hedging
4-partially available, little or no hedging
5-partially available, moderately hedged
6-partially available, severely hedged
7-unavailable
8-dead

Age class

S seedlings, less than 0.3 cm basal diameter
Y young, 0.3 to 0.6 cm basal diameter
M mature, over 0.6 cm basal diameter
D decadent, more than 25% of crown surface dead

Hedging classification

Classification based upon the length of appearance (hedging of the previous year's growth [the two-year-old wood])
1 none too light 2 moderate 3 severe

Availability

Visual estimate of the percent of the plant available to deer as browse, i.e., that portion less than six feet tall.

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: br80
Period Covered: 4/29/80-5/16/80

Parameter	Length	Format	Units
space	1	1x	na
station	5	a5	-
space	1	1x	na
latitude	8	f8.4	degrees.latitude
space	1	1x	na
longitude	8	f8.4	degrees.longitude
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
plant.number (obs.no.)	2	a2	-
space	1	1x	na
species.code	6	a6	-
space	1	1x	na
form.class	1	a1	-
space	1	1x	na
age.class	1	a1	-
space	1	1x	na
leader.usage	2	a2	-
space	1	1x	na
hedging.class	1	a1	-
space	1	1x	na
availability	3	a3	-

Form class

1-all available, little or no hedging
2-all available, moderate hedging
3-all available, severe hedging
4-partially available, little or no hedging
5-partially available, moderately hedged
6-partially available, severely hedged
7-unavailable
8-dead

Age class

S seedlings, less than 0.3 cm basal diameter
Y young, 0.3 to 0.6 cm basal diameter
M mature, over 0.6 cm basal diameter
D decadent, more than 25% of crown surface dead

Hedging classification

Classification based upon the length of appearance (hedging of the previous year's growth [the two-year-old wood])

1 none too light 2 moderate 3 severe

Availability

Visual estimate of the percent of the plant available to deer as browse, i.e., that portion less than six feet tall.

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: brsp80, br81
Period Covered: 04/29/80 - 05/16/80
04/28/81 - 05/15/81

Parameter	Length	Format	Units
space	1	1x	na
habitat	2	a2	-
space	2	2x	na
transect	2	i2	-
space	2	2x	na
date	6	i6	mmddyy
space	2	2x	na
number	2	i2	-
space	2	2x	na
species.code	6	a6	-(see.below)
space	2	2x	na
form.class	1	i1	-(see.below)
space	2	2x	na
age.class	1	a1	-(see.below)
space	2	2x	na
leader.usage	2	i2	-(see.below)
space	2	2x	na
hedging.class	1	a1	-(see.below)
space	2	2x	na
availability	3	i3	-(see.below)

Form Class

1-all available, little or no helping
2-all available, moderate hedging
3-all available, severe hedging
4-partially available, little or no hedging
5-partially available, moderately hedged
6-partially available, severely hedged
7-unavailable
8-dead

Age Class

S seedlings, less than 0.3 cm basal diameter
Y young, 0.3 to 0.6 cm basal diameter
M mature, over 0.6 cm basal diameter
D decadent, more than 25% of crown surface dead

Hedging Classification

Classification based upon the length of appearance (hedging of the previous year's growth [the two-year-old wood])
1 none too light 2 moderate 3 severe

Availability

Visual estimate of the percent of the plant available to deer as browse, i.e., that portion less than six feet tall.

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: rbr81
Period Covered: 06/23/81

Parameter	Length	Format	Units
space	1	1x	na
vegetation.type	2	a2	-
space	1	1x	na
sample.unit	2	a2	-
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
observer	2	a2	-
space	1	1x	na
species.code	6	a6	-(see.below)
space	1	1x	na
form.class	2	a2	-(see.below)
space	1	1x	na
age.class	2	a2	-(see.below)
space	1	1x	na
leader.usage.percent	4	a4	-(see.below)
space	1	1x	na
hedging.class	2	a2	-(see.below)
space	1	1x	na
availability.percent	6	a6	-(see.below)

Form class

1-all available, little or no hedging
2-all available, moderate hedging
3-all available, severe hedging
4-partially available, little or no hedging
5-partially available, moderately hedged
6-partially available, severely hedged
7-unavailable
8-dead

Age class

S seedlings, less than 0.3 cm basal diameter
Y young, 0.3 to 0.6 cm basal diameter
M mature, over 0.6 cm basal diameter
D decadent, more than 25% of crown surface dead

Hedging classification

Classification based upon the length of appearance (hedging of the previous year's growth [the two-year-old wood])
1 none too light 2 moderate 3 severe

Availability

Visual estimate of the percent of the plant available to deer as browse, i.e., that portion less than six feet tall.

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: rpnd
Period Covered: 09/00/78-09/00/78

Parameter	Length	Format	Units
space	1	1x	na
station	5	a5	na
space	2	2x	na
latitude	8	f8.4	degrees.latitude
space	2	2x	na
longitude	8	f8.4	degrees.longitude
space	2	2x	na
date	6	a6	mmddyy(dd.is.zero)
space	2	2x	na
species	7	a7	-
space	2	2x	na
plot	2	a2	-
space	12	12x	na
weight	7	f7.2	grams(what.is.it?)

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: rprd
Period Covered: 09/25/79-10/10/79

Parameter	Length	Format	Units
space	1	1x	na
station	5	a5	na
space	2	2x	na
latitude	8	f8.4	degrees.latitude
space	2	2x	na
longitude	8	f8.4	degrees.longitude
space	2	2x	na
date	6	a6	mmddyy
space	2	2x	na
species	7	a7	-
space	2	2x	na
plot	2	a2	-
space	2	2x	na
type	1	a1	-
space	2	2x	na
estimated.weight	5	f5.2	grams
space	2	2x	na
green.weight	5	f5.2	grams
space	2	2x	na
dry.weight	5	f5.2	grams
space	2	2x	na
calculated.weight	5	f5.2	grams

5 plots are clipped.
5 plots are protected - don't have dry but calculated weight.

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: rprd80
Period Covered: 09/03/80 - 09/17/80

Parameter	Length	Format	Units
space	1	1x	na
station	5	a5	-
space	1	1x	na
latitude	8	f8.4	degrees.latitude
space	1	1x	na
longitude	8	f8.4	degrees.longitude
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
species	6	a6	-
space	1	1x	na
plot	2	a2	-
space	1	1x	na
exclosure (y.or.n)	1	a1	-
space	1	1x	na
estimated.weight	4	a4	grams
space	1	1x	na
green.weight	4	a4	grams
space	1	1x	na
dry.weight	4	a4	grams

If exclosure = n, then the green weight and dry weight variables will be blank.

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: ran81
Period Covered: 8/26 - 9/10/81

Parametr	Length	Format	Units
space	1	1x	na
station	5	a5	na
space	22	22x	na
date	6	a6	mmddyy
space	2	2x	na
species	7	a7	-
space	2	2x	na
plot	2	a2	-
space	12	12x	na
weight	7	f7.2	grams(what.is.it?)
space	2	2x	na
exclosure	1	a1	-

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: sch380
Period Covered:

Parameter	Length	Format	Units
space	1	1x	na
substrate.type.location	2	a2	-
space	1	1x	na
depth.of.soil.sample	2	a2	-
space	1	1x	na
soil.texture	4	a4	-
space	1	1x	na
pH.water	5	i5	-
space	1	1x	na
pH buffer	5	i5	-
space	1	1x	na
cation.exchange.capacity	5	i5	-
space	1	1x	na
salt.content	5	i5	-
space	1	1x	na
sodium(Na)	5	i5	mg/l
space	1	1x	na
lime	5	i5	-
space	1	1x	na
organic.matter	5	i5	-
space	1	1x	na
organics	5	i5	-
space	1	1x	na
nitrate (NO_3)	5	i5	mg/l
space	1	1x	na
phosphorus (P)	5	i5	mg/l
space	1	1x	na
potassium (K)	5	i5	mg/l
space	1	1x	na
calcium (Ca)	5	i5	mg/l
space	1	1x	na
magnesium (Mg)	5	i5	mg/l
space	1	1x	na
sulfur (S)	5	i5	mg/l
space	1	1x	na
boron (B)	5	i5	mg/l
space	1	1x	na
zinc (Zn)	5	i5	mg/l
space	1	1x	na
iron (Fe)	5	i5	mg/l
space	1	1x	na
manganese (Mn)	5	i5	mg/l
space	1	1x	na

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: sch380 (continued from previous page)
Period Covered:

Parameter	Length	Format	Units
copper (Cu)	5	i5	mg/l
space	1	1x	na
arsenic (As)	5	i5	mg/l
space	1	1x	na
fluorine (F)	5	i5	mg/l
space	1	1x	na
molybdenum (Mo)	5	i5	mg/l
space	1	1x	na
selenium (Se)	5	i5	mg/l

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: phy79
Period Covered: 06/14/79 - 06/29/79

Parameter	Length	Format	Units
Record 1			
space	1	1x	na
station	6	a6	-
space	2	2x	na
latitude	8	f8.4	degrees.latitude
space	2	2x	na
longitude	8	f8.4	degrees.longitude
space	2	2x	na
date	5	5a	mddyy
space	2	2x	na
elevation	4	i4	ft
space	2	2x	na
aspect	3	i3	-
space	2	2x	na
slope	3	i3	-
density.or.cover	1	a1	d.or.c
space	2	2x	na
species	7	a7	-
Record 2			
macroplot or microplots (20 values)	5	f5.1	-
same for next 19 values			

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: phy80
Period Covered: 06/05/80 - 06/17/80

Parameter	Length	Format	Units
space	1	1x	na
station	6	a6	-
space	2	2x	na
latitude	8	f8.4	degrees.latitude
space	2	2x	na
longitude	8	f8.4	degrees. longtitude
space	2	2x	na
date	6	a6	mmddyy
space	2	2x	na
species	7	a7	-
space	2	2x	na
growth.form	1	a1	-
space	2	2x	na
parameter(d.or.c)	1	a1	-
sample.plots(1_20)	60	20i3	-

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: pht81
Period Covered: June 1981

Parameter	Length	Format	Unit
space	1	1x	na
station	6	a6	-
space	22	22x	na
date	6	a6	mmddyy
space	2	2x	na
species	7	a7	-
space	2	2x	na
growth.form	1	a1	-
space	2	2x	na
parameter(d.or.c)	1	a1	-
sample.plots(1_20)	60	20i3	-

Ca_md Formats

Tract: C-b
Monitoring Activity: TERRESTRIAL
Format: derk81
Period Covered: 1/79 - 12/81

Parameter	Length	Format	Units
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
mile.marker	4	f4.1	-
space	1	1x	na
age	1	1	-
space	1	1x	na
sex	1	a1	-
space	1	ix	na
number.killed	1	i1	-

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: rcoa81, rbia81
Period Covered: June 30, 1981
June 30, 1981

Parameter	Length	Format	Unit
space	1	1x	na
habitat	2	a2	-
space	1	1x	na
transect	3	a3	-
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
species.code	7	a7	-
space	1	1x	na
growth.form	1	a1	-
space	1	1x	na
parameter	1	a1	-
	record 1		
above.information.plus sample.plots 1-20	60	20i3	-
	record 2		
init.information/plus sample.plots 21-40	60	20i3	-
	record 3		
init.information.plus sample.plots 41-50	30	10i3	-

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: rcovb81, rbib81
Period Covered: June 30, 1981
June 30, 1981

Parameter	Length	Format	Units
space	1	1x	na
habitat	2	a2	-
space	1	1x	na
transect	3	a3	-
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
species.code	7	a7	-
space	1	1x	na
growth form	1	a1	-
space	1	1x	na
parameter	1	a1	-
	record 1		
above.information.plus sample.plots 1-20	60	20i3	-
	record 2		
init.information.plus sample.plots 21-40	60	20i3	-
	record 3		
init.information.plus sample.plots 41-60	60	20i3	
	record 4		
init.information.plus sample.plots 61-80	60	3i20	-
	record 5		
init.information.plus sample.plots 81-100	60	3i20	-

Ca_md Formats

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: recd81, rbib81
Period Covered: June 30, 1981

Parameter	Length	Format	Units
space	1	1x	na
habitat	2	a2	-
space	1	1x	na
transect	3	a3	-
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
species code	7	a7	-
space	1	1x	na
growth.form	1	a1	-
space	1	1x	na
parameter	1	a1	-
	record 1		
above.information.plus sample.plots.1-20	60	20i3	-
	record 2		
init.information.plus sample.plots 21-40	60	20i3	-
	record 3		
init.information.plus sample.plots 41-60	60	20i3	-
	record 4		
init.information.plus sample.plots 61-80	60	20i3	-
	record 5		
init.information.plus sample.plots 81-100	60	20i3	-
	record 6		
init.information.plus sample.plots 101-120	60	20i3	-
	record 7		
init.information.plus sample.plots 121-140	60	20i3	-
	record 8		
init.information.plus sample.plots 141-150	30	10i3	-

Tract: C-a
Monitoring Activity: Mule Deer Habitat
Format: j48_16
Period Covered: 1984

Parameters	Col.	Format	Units
veg_type	1	A2	
transect	3	I2	
plot	5	I2	
seed	7	I1	
chop	8	I1	
fertilizer	9	I1	
orientation	10	I1	
date	11	I1	
species	20	3I2	
gr_form	26	A6	
invad	27	A1	
param	28	A1	
cover	29	I4	

Tract: C-a
Monitoring Activity: Deer Pellet Count
Format: j16.27
Period Covered: 1978-1982

Parameter	Col.	Format	Units
block	1	I2	
samp-unit	5	I2	
date	10	3I2	mo-da-yr
elev	20	I4	
slope	25	I2	
aspect	30	A2	
veg-type	35	A2	
transect	40	I1	
plot	45	I2	
pellet	50	I2	

Tract: C-a
Monitoring Activity: Phytosociological Studies
Format: j16.19
Period Covered: 1979-1982

Parameter	Col.	Format	Units
veg-type	1	A2	
area	3	I1	
transect	5	A1	
date	6	3I2	mo-da-yr
species	12	A6	
gr_form	18	A1	
param	19	A1	
plt 01	20	I3	
plt 02	23	I3	
plt 03	26	I3	
plt 04	29	I3	
plt 05	32	I3	
plt 06	35	I3	
plt 07	38	I3	
plt 08	41	I3	
plt 09	44	I3	
plt 10	47	I3	
plt 11	50	I3	
plt 12	53	I3	
plt 13	56	I3	
plt 14	59	I3	
plt 15	62	I3	
plt 16	65	I3	
plt 17	68	I3	
plt 18	71	I3	
plt 19	74	I3	
plt 20	77	I3	

Tract: C-a
Monitoring Activity: Browse Condition & Utilization
Format: jkc016.18
Period Covered: 1977-1982

Parameter	Col.	Format	Units
vegetation type	1	A2	
transect number	5	I3	
date	10	3I2	mo-da-yr
plant number	17	I2	
species	20	A6	
growth form	27	A1	
form class	30	I1	
age class	35	A1	
hedging class	40	A1	
species availability	45	I3	%
leader usage	50	I3	%

Ca_md Format

Tract: C-a
Monitoring Activity: Wildlife - Mule Deer Pellet Count
Format: j26_9
Period Covered: 1978-1983

Parameter	Col.	Format	Units
block	1	I2	
sample unit	3	I2	
date	8	3I2	mo-da-yr
elev	14	I4	
slope	19	I2	
aspect	22	A2	
veg_type	24	A2	
transect	26	I1	
plot	27	I2	
pellet	29	I2	

Tract: C-a
Monitoring Activity: Avafauna
Format: Avi80
Period Covered: 1980

Parameter	Col.	Format	Units
station	2	A6	
latitude	8	F9.4	
longitude	17	F9.4	
date	27	A6	mo-da-yr
spec	34	A6	
No	41	I3	
time	45	I4	

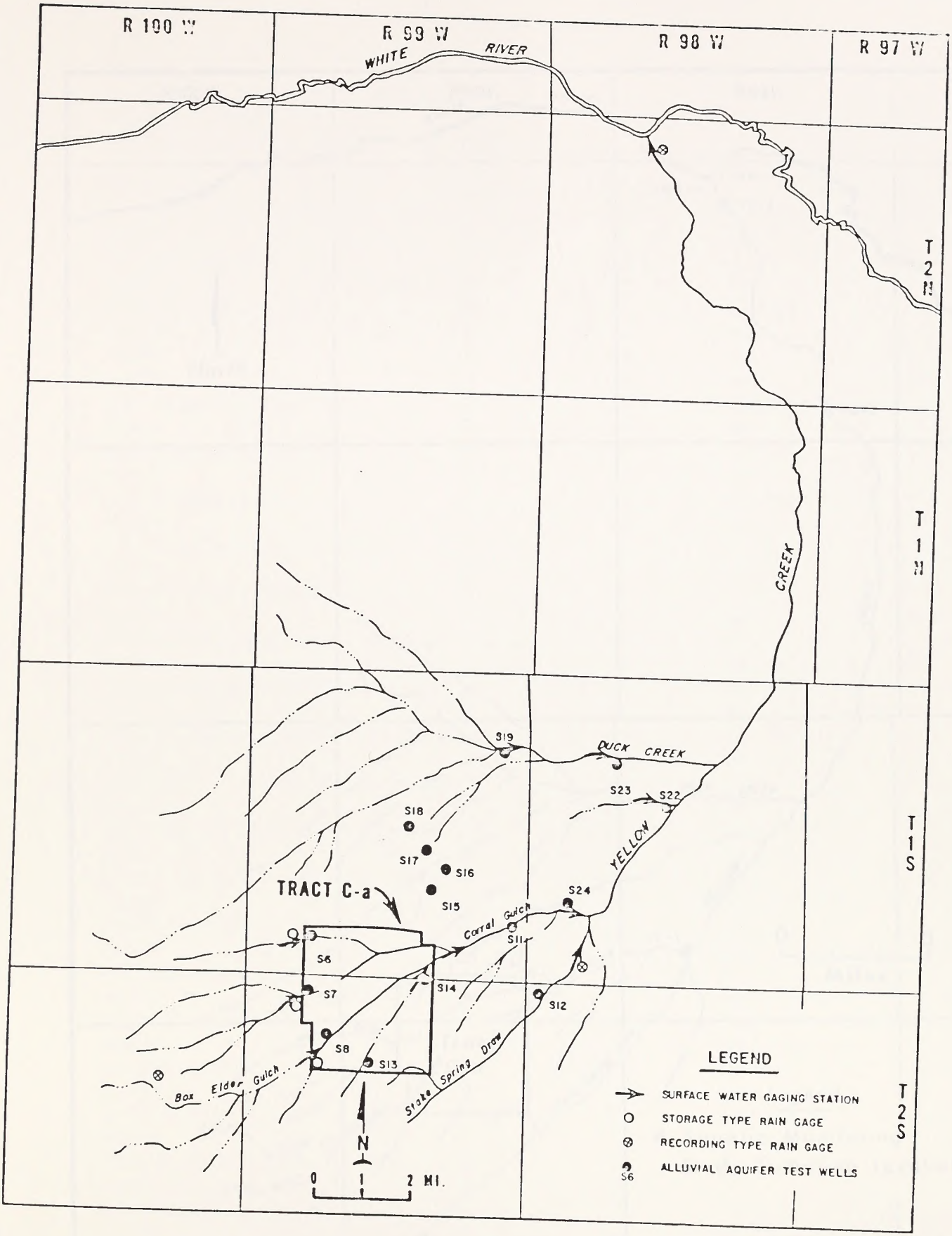


Figure 7-2-8

YELLOW CREEK DRAINAGE BASIN

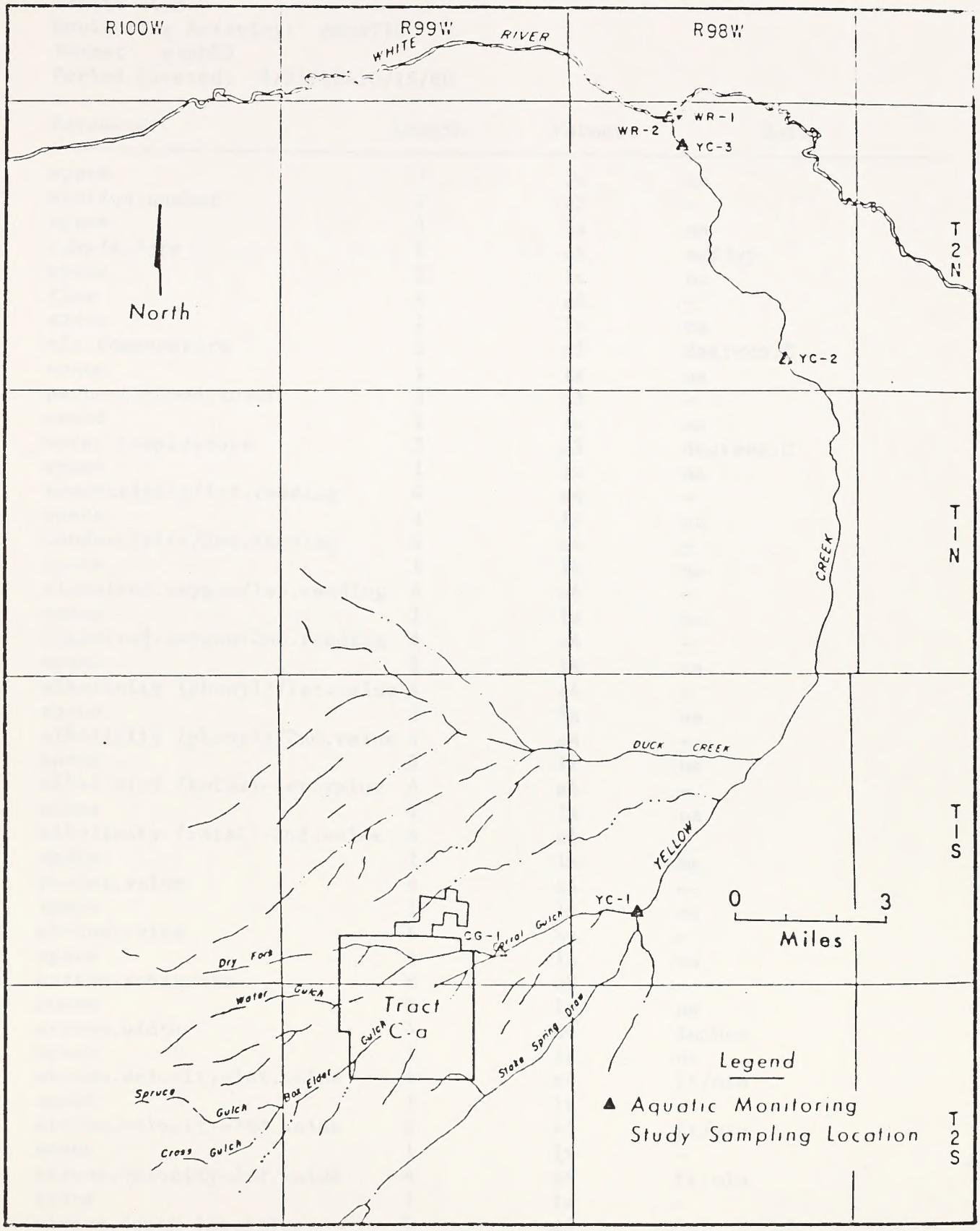


Figure 5-1
Locations of Aquatic Ecology MDP Sampling Sites

Ca_md Formats

Tract: C-a
Monitoring Activity: AQUATIC
Format: aqph80
Period Covered: 4/21/80-10/15/80

Parameter	Length	Format	Units
space	1	1x	na
station.number	2	a2	-
space	1	1x	na
sample.date	6	a6	mmddyy
space	1	1x	na
time	4	a4	-
space	1	1x	na
air.temperature	3	a3	degrees.C
space	1	1x	na
percent.cloud.cover	3	a3	-
space	1	1x	na
water.temperature	3	a3	degrees.C
space	1	1x	na
conductivity/1st.reading	4	a4	-
space	1	1x	na
conductivity/2nd.reading	4	a4	-
space	1	1x	na
dissolved.oxygen/1st.reading	4	a4	-
space	1	1x	na
dissolved.oxygen/2nd.reading	4	a4	-
space	1	1x	na
alkalinity (phenyl)/1st.value	4	a4	-
space	1	1x	na
alkalinity (phenyl)/2nd.value	4	a4	-
space	1	1x	na
alkalinity (total)-1st.value	4	a4	-
space	1	1x	na
alkalinity (total)-2nd.value	4	a4	-
space	1	1x	na
ph-1st.value	4	a4	-
space	1	1x	na
ph-2nd.value	4	a4	-
space	1	1x	na
bottom.substrate	8	a8	-
space	1	1x	na
stream.width	4	a4	inches
space	1	1x	na
stream.velocity-1st.value	4	a4	ft/min
space	1	1x	-
stream.velocity-2nd.value	4	a4	ft/min
space	1	1x	-
stream.velocity-3rd.value	4	a4	ft/min
space	1	1x	-
stream.depth-1st.value	4	a4	ft
space	1	1x	-
stream.depth-2nd.value	4	a4	ft
space	1	1x	-
stream.depth-3rd.value	4	a4	ft

Tract: C-a
Monitoring Activity: AQUATIC
Format: aqch80
Period Covered: 00/80-00/80

Parameter	Length	Format	Units
space	1	1x	na
station.number	2	a2	-
space	1	1x	na
replicate.designation(a.or.b)	1	a1	-
space	1	1x	na
date.sampled	6	a6	mmddyy
space	1	1x	na
date.received	6	a6	mmddyy
space	1	1x	na
date.reported	6	a6	mmddyy
space	1	1x	na
rice.sample.number	8	a8	-
space	1	1x	na
client.number	10	a10	-
space	1	1x	na
alkalinity ($CaCO_3$)	4	a4	mg/l
space	1	1x	na
alkalinity (pht)	2	a2	-
space	1	1x	na
bicarbonate	3	a3	mg/l
space	1	1x	na
calcium	3	a3	mg/l
space	1	1x	na
chloride	3	a3	mg/l
space	1	1x	na
fluoride	3	a3	mg/l
space	1	1x	na
magnesium	3	a3	mg/l
space	1	1x	na
nitrate	3	a3	mg/l
space	1	1x	na
ortho-phosphorus	3	a3	mg/l
space	1	1x	na
total.phosphorus	3	a3	mg/l
space	1	1x	na
potassium	3	a3	mg/l
space	1	1x	na
silica	3	a3	mg/l
space	1	1x	-
sodium	3	a3	mg/l
space	1	1x	-
dissolved.solids	4	a4	-
space	1	1x	-
sulfate	4	a4	mg/l
space	1	1x	-
turbidity	3	a3	-
space	1	1x	-
boron	4	a4	mg/l

Tract: C-a
Monitoring Activity: AQUATIC
Format: aqpr80
Period Covered: 4/21/80-10/00/80

Parameter	Length	Format	Units
space	1	1x	na
station.number	2	a2	-
space	1	1x	na
replicate.designation	1	a1	-
space	1	1x	na
species.code	6	a6	-
space	1	1x	na
number.observed	3	a3	-
space	1	1x	na
date.sampled	6	a6	mmddyy
space	1	1x	na
sample.location	2	a2	-
space	1	1x	na
area.of.transect	6	a6	-
space	1	1x	na
number.of.drops	3	a3	-
space	1	1x	na
number.of.transects	2	a2	-
space	1	1x	na
cover.slip.area	5	a5	-
space	1	1x	na
number.of.drops/ml	3	a3	-
space	1	1x	na
number.of.replicates	1	a1	-
space	1	1x	na
sample.log.number	7	a7	-

P is used for number observed occasionally.
Six files are recorded together.

Tract: C-a
Monitoring Activity: AQUATIC
Format: gpd79
Period Covered: 4/25/79 - 10/09/79

Parameter	Length	Format	Units
space	1	1x	na
mariah.no	3	i3	-
space	2	2x	na
station	2	i2	-
space	2	2x	na
log	12	a12	-
space	2	2x	na
date	8	a8	mm/dd/yr
space	2	2x	na
collector	5	a5	-
space	2	2x	na
NOr	2	i2	-
space	2	2x	na
date2	8	a8	mm/dd/yy
space	2	2x	na
analy	5	a5	-
space	2	2x	na
species	4	a4	-
space	2	2x	na
rep.a	4	i4	-
space	2	2x	na
rep.8	4	i4	-

Tract: C-a
Monitoring Activity: AQUATIC

Format: aqbn80
Period Covered: 4/80 - 10/80

Parameter	Length	Format	Units
space	1	1x	na
station	2	a2	-
space	1	1x	na
species.code	5	a5	-
space	1	1x	na
number.observed-replicate.1	3	a3	-
space	1	1x	na
number.observed-replicate.2	3	a3	-
space	1	1x	na
number.observed-replicate.3	3	a3	-
space	1	1x	na
number.of.replicates	1	a1	-
space	1	1x	na
sample.date	6	a6	mmddyy
space	1	1x	na
analysis.date	6	a6	mmddyy
space	1	1x	na
sample.log.number	18	a18	-

Six files are recorded together.

Ca_md Formats

Tract: C-a
Monitoring Activity: AQUATIC
Format: bena80, benm80
Period Covered: 4/80-4/80
5/80-5/80

Parameter	Length	Format	Units
space	1	1x	na
mariah.project.number	3	a3	-
space	2	2x	na
station.number	2	i2	-
space	2	2x	na
sample.log.number	11	a11	-
space	2	2x	na
sample.data	6	a6	month
space	2	2x	na
sample.date	4	a4	year
space	2	2x	na
collector	5	a5	-
space	2	2x	na
number.of.replicates	1	i1	-
space	2	2x	na
analysis.date	8	a8	mm-dd-yy
space	2	2x	na
analyst	12	a12	-
space	2	2x	na
species.code	4	a4	-
space	2	2x	na
number.observed	2	a2	-
space	2	2x	na
number.observed	2	a2	-
space	2	2x	na
number.observed	2	a2	-

Tract: C-a
Monitoring Activity: AQUATIC
Format: aprbio
Period Covered: 4/21/80-00/00/80

Parameter	Length	Format	Units
space	1	1x	na
station.number	2	a2	-
space	1	1x	na
replicate.designation	1	a1	-
space	1	1x	na
dry.weight	8	a8	grams(decimal)
space	1	1x	na
ash.weight	8	a8	grams(decimal)
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
area scraped	3	a3	-
space	1	1x	-
log.number	7	a7	-

Ca_md Formats

Tract: C-a
Monitoring Activity: AQUATIC
Format: per80a, per80m
Period Covered: 4/80-4/80
5/80-5/80

Parameter	Length	Format	Units
space	1	1x	na
mariah.log.number	7	a7	-
space	2	2x	na
sample.station.number	2	i2	-
space	2	2x	na
replicate.designation	1	a1	-
space	2	2x	na
sample.data	6	a6	mmddyy
space	2	2x	na
sample.location	12	a12	na
space	2	2x	na
area.of.transect	6	f6.3	-
space	2	2x	na
number.of.drops	3	i3	number.of.drops/ml
space	2	2x	na
number.of.times.surveyed	2	i2	-
space	2	2x	na
species.code	6	a6	-
space	2	2x	na
number.observed	3	a3	-

P occurs occasionally for number observed.

Ca_md Formats

Tract: C-a
Monitoring Activity: AQUATIC
Format: gpbd79
Period Covered: 4/01/79-10/01/79

Parameter	Length	Format	Units
space	1	1x	na
date	12	a12	number.1.then.month
space	2	2x	na
date	4	a4	year
space	2	2x	na
area.scraped	2	i2	-
space	2	2x	na
log.number	7	a7	-
space	2	2x	na
station/replicate.designation	3	a3	-
space	2	2x	na
dry.weight	8	f8.4	grams
space	2	2x	na
ash.weight	8	f8.4	grams

Ca_md Formats

Tract: C-a
Monitoring Activity: AQUATIC
Format: gppd79
Period Covered: 4/25/79-10/09/79

Parameter	Length	Format	Units
space	1	1x	na
mariah.log.number	7	a7	-
space	2	2x	na
sample.station.number	2	i2	-
space	2	2x	na
replicate.designation	1	a1	-
space	2	2x	na
sample.date	6	a6	mmddyy
space	2	2x	na
sample.location	12	a12	-
space	2	2x	na
area.of.transect	6	f6.3	-
space	2	2x	na
number.of.drops	3	i3	number of drops/ml
space	2	2x	na
number.of.times.surveyed	2	i2	-
space	2	2x	na
species.code	6	a6	-
space	2	2x	na
number.observed	3	a3	-

P occurs for number observed occasionally.

Ca_md Formats

Tract: C-a
Monitoring Activity: AQUATIC
Format: gmcd79
Period Covered: 04/26/79-10/12/79

Parameter	Length	Format	Units
client.number	8	a8	-
space	2	2x	na
date.sampled	8	a8	mddyy
space	2	2x	na
date.received	8	a8	mddyy
space	2	2x	na
date.reported	8	a8	mddyy
space	2	2x	na
station.number	3	a3	-
space	2	2x	na
all.sampled.number	8	a8	-
space	2	2x	na
alkalinity(CaCO3)	5	f5.1	mg/l
space	2	2x	na
alkalinity(PHT)	5	f5.1	-
space	2	2x	na
bicarbonate	5	f5.1	mg/l
space	2	2x	na
calcium	4	f4.1	mg/l
space	2	2x	na
chloride	4	a4	mg/l
space	2	2x	na
fluoride	4	f4.1	mg/l
space	2	2x	na
magnesium	4	f4.1	mg/l
space	2	2x	na
nitrate	4	a4	mg.l
space	2	2x	na
ortho-phosphorus	4	a4	mg/l
space	2	2x	na
total-phosphorus	5	f5.1	mg/l
space	2	2x	na
potassium	5	f5.1	mg/l
space	2	2x	na
silica	5	f5.1	mg/l
space	2	2x	na
sodium	5	f5.1	mg/l
space	2	2x	na
dissolved.solids	5	f5.1	mg/l
space	2	2x	na
sulfate	5	f5.1	mg/l
space	2	2x	na
turbidity	5	f5.1	-
space	2	2x	na
boron	4	a4	mg/l

Tract: C-a
Monitoring Activity: AQUATIC
Format: aqc81
Period Covered: 04/27/81

Parameter	Length	Format	Units
	Record 1		
space	1	1x	na
station	4	a4	-
space	1	1x	na
date	6	a6	mmddyy
magnesium	10	a1,f9.3	mg/l
sodium	10	a1,f9.3	mg/l
potassium	10	a1,f9.3	mg/l
iron	10	a1,f9.3	mg/l
bicarbonate	10	a1,f9.3	mg/l
carbonate	10	a1,f9.3	mg/l
hydroxide	10	a1,f9.3	mg/l
sulfates	10	a1,f9.3	mg/l
chloride	10	a1,f9.3	mg/l
TDS	10	a1,f9.3	mg/l

99.9 not tested all values have sign < or =

	Record 2		
space	12	12x	na
TSS	10	a1,f9.3	mg/l
total alk	10	a1,f9.3	mg/l
total hard	10	a1,f9.3	mg/l
total PO_4	10	a1,f9.3	mg/l
ammonia	10	a1,f9.3	mg/l
nitrate	10	a1,f9.3	mg/l
fluoride	10	a1,f9.3	mg/l
bromide	10	a1,f9.3	mg/l
DOC	10	a1,f9.3	mg/l
arsenic	10	a1,f9.3	ug/l
boron	10	a1,f9.3	ug/l

Format: aqc81 (cont)

Parameter	Length	Format	Units
	Record 3		
space	12	12x	na
mercury	10	a1,f9.3	ug/l
molybdenum	10	a1,f9.3	ug/l
selenium	10	a1,f9.3	ug/l
silica	10	a1,f9.3	ug/l
vanadium	10	a1,f9.3	ug/l
aluminum	10	a1,f9.3	ug/l
barium	10	a1,f9.3	ug/l
beryllium	10	a1,f9.3	ug/l
bismuth	10	a1,f9.3	ug/l
cadmium	10	a1,f9.3	ug/l
chromium	10	a1,f9.3	ug/l
	Record 4		
space	12	12x	na
copper	10	a1,f9.3	ug/l
gallium	10	a1,f9.3	ug/l
germanium	10	a1,f9.3	ug/l
lead	10	a1,f9.3	ug/l
lithium	10	a1,f9.3	ug/l
manganese	10	a1,f9.3	ug/l
nickel	10	a1,f9.3	ug/l
strontium	10	a1,f9.3	ug/l
titanium	10	a1,f9.3	ug/l
zinc	10	a1,f9.3	ug/l
zirconium	10	a1,f9.3	ug/l
	Record 5		
gross alpha	10	a1,f9.3	ug/l
gross beta	10	a1,f9.3	ug/l
cation/anion	10	a1,f9.3	ug/l

Tract: C-a
Monitoring Activity: AQUATIC
Format: aqpy81
Period Covered: 04/28/81

Parameters	Length	Format	Units
space	1	1x	na
station	4	a4	-
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
time	4	a4	hhmm
space	1	1x	na
air.temperature	5	a5	-
space	1	1x	na
cloud.cover	5	a5	-
space	1	1x	na
water.temperature-rep.1		a5	-
space	1	1x	na
water.temperature-rep.2		a5	-
space	1	1x	na
conductivity-rep.1		a5	
space	1	1x	na
conductivity-rep.2		a5	
space	1	1x	na
dissolved.oxygen-rep.1		a5	
space	1	1x	na
dissolved.oxygen-rep.2		a5	
space	1	1x	na
Ph-rep.1	5	a5	-
space	1	1x	na
Ph-rep.2	5	a5	-
space	1	1x	na
stream.width	5	a5	-
space	1	1x	na
alkalinity.phenyl-rep.1	5	a5	-
space	1	1x	na
alkalinity.phenyl-rep.2	5	a5	-
space	1	1x	na
alkalinity.total-rep.1	6	a6	-
space	1	1x	na
alkalinity.total-rep.2	5	a5	-
space	1	1x	na
unknown	6	a6	-
space	1	1x	na
substrate.description	20	a20	-

All values not checked are 99.9

Ca_md Formats

Tract: C-a
Monitoring Activity: AQUATIC
Format: per81
Period Covered: 4/28/81

Parameter	Length	Format	Units
space	1	1x	na
station.number	4	a4	-
space	1	1x	na
replicate.Designation	1	a1	-
space	1	1x	na
species.code	6	a6	-
space	1	1x	na
number.observed	3	a3	-
space	1	1x	na
date/samples	6	a6	mmddyy
space	1	1x	na
sample.location	2	a2	-
space	1	1x	na
area.of.transect	5	f5.4	-
space	1	1x	na
number.of.drops	3	a3	-
space	1	1x	na
number.of.transects	2	a2	-
space	1	1x	na
cover.slip.area	5	a5	-
space	1	1x	na
number.of.drops/ml	3	a3	-
space	1	1x	na
number.of.replicates	1	a1	-
space	1	1x	na
sample.log.number	7	a7	-
space	1	1x	na
original.volume	3	a3	(ml)added
space	1	1x	na
concentrate.volume	3	a3	(ml)added

Ca_md Formats

Tract: C-a
Monitoring Activity: AQUATIC
Format: ben81
Period Covered: 4/26/81

Parameter	Length	Format	Units
space	1	1x	na
station.number	4	a4	-
space	1	1x	na
species.code	5	a5	-
space	1	1x	na
number.observed-replicate.1	3	i3	-
space	1	1x	na
number.observed-replicate.2	3	i3	-
space	1	1x	na
number.observed-replicate.3	3	i3	-
space	1	1x	na
number.of.replicates	1	a1	-
space	1	1x	na
sample.date	6	a6	mmddyy
space	1	1x	na
analysis.date	6	a6	mmddyy
space	1	1x	na
sample.log.number	18	a18	-
space	1	1x	na
sample.size	3	a3	-

Tract: C-a
Monitoring Activity: Aquatic - Water Chemistry
Format: j16.14
Period Covered: 1982

Parameters	Col.	Format	Units
station	1	A4	
date	5	3I2	mo-da-yr
Ca	15	F5.1	mg/1
Mg	20	F5.1	mg/1
Na	25	F5.1	mg/1
K	30	F5.2	mg/1
Fe	35	F5.2	mg/1
HCO_3	40	F5.1	mg/1
CO_3	45	F5.1	mg/1
OH	50	F5.1	mg/1
SO_4	55	F5.1	mg/1
Cl	60	F5.2	mg/1
TDS	65	F5.0	mg/1

Record 2

Parameters	Col.	Format	Units
TSS	15	F5.1	mg/1
ALK	20	F5.0	mg/1
HARD	25	F5.0	mg/1
PO_4	30	F5.2	mg/1
NH_3	35	F5.2	mg/1
NO_3	40	F5.1	mg/1
F	45	F5.2	mg/1
Br	50	F6.1	mg/1
DOC	56	F4.1	-
AS	60	F5.2	mg/1
B	65	F6.3	mg/1

Record 3

Parameters	Col.	Format	Units
Hg	15	F5.3	mg/1
Mol	20	F5.1	mg/1
Se	25	F5.2	mg/1
SiO_2	30	F5.1	mg/1
V	35	F5.1	mg/1
Al	40	F5.1	mg/1
Ba	45	F5.1	mg/1
Be	50	F5.2	mg/1
Bi	55	F5.2	mg/1
Cad	60	F5.2	mg/1
Cz	65	F6.3	mg/1

Record 4

Parameters	Col.	Format	Units
Cu	15	F5.2	mg/l
Ga	20	F5.1	mg/l
Ge	25	F5.1	mg/l
Pb	30	F5.2	mg/l
Li	35	F5.2	mg/l
Mn	40	F5.2	mg/l
Ni	45	F5.2	mg/l
Sr	50	F5.2	mg/l
Ti	55	F5.1	mg/l
Zn	60	F5.2	mg/l
Zr	65	F6.2	mg/l

Record 5

Parameters	Col.	Format	Units
Gross Alpha	15	F5.1	pc/l
Gross Beta	20	F5.1	pc/l
Cat/Anion Bal	25	F5.2	
Total Fe	30	F5.1	mg/l
IVO_2	35	F5.1	mg/l
KJEL	40	F5.1	mg/l
ORTHOP	45	F5.2	mg/l

Tract: C-a
Monitoring Activity: Aquatic_Benthic Macroinvertebrate
Format: j26_8
Period Covered: 1979 - 1983

Parameter	Col.	Format	Units
date	1	3I2	
station	7	A4	
Cm (collectiom method)	11	F3.0	
CF (conversion factor)	14	F4.1	no./m^2
species	18	A6	
taxon	24	F3.0	
rep 1	27	F6.0	
rep 2	33	F6.0	
rep 3	39	F6.0	
rep 1A	45	F7.1	
rep 2A	52	F7.1	
rep 3A	59	F7.1	
density	66	F7.1	
season	73	A6	
rptyr	79	I4	

CM - colllectionm methods codes
01 - modified surber
02 - Ekman dredge
03 - D-frame
04 - Modified Hess (elliptical)
05 - Modified Hess (cylindrical)
06 - Ellipse surber
07 - Ellipse surber

Tract: C-a
Monitoring Activity: Aquatic_Stream Physical
Format: j26_7
Period Covered: 1974 - 1982

Parameter	Col.	Format	Units
station	1	A5	-
date	6	3I2	mo-da-yr
Samp_time	12	F5.0	
Air_temp	17	F6.0	degrees F
Est_wd	23	F6.0	
Est_ws	29	F6.0	
Cld_cov	35	F6.0	%
Water Temp_A	41	F4.1	degress C
Water Temp_B	45	F4.1	degress C
Water Temp_C	49	F4.1	degress C
Cond_A	53	F5.0	
Cond_B	58	F5.0	
Cond_C	63	F5.0	
Do_A	68	F3.1	
Do_B	71	F3.1	
Do_C	74	F3.1	
Ph_A	77	F3.1	
Ph_B	80	F3.1	
Ph_C	83	F3.1	

replaces j16.15

Ca_md Format

Tract: C-a
Monitoring Activity: Aqua Periphyton
Format: j16.17
Period Covered: 1982

Parameter	Col.	Format	Units
date	1	3I2	mo-da-yr
station	7	A4	
species	11	A6	
count rep 1	17	I5	
count rep 2	22	I5	
count rep 3	27	I5	
count rep 4	32	I5	
count rep 5	37	I5	
count rep 6	42	I5	
MM^3	47	I4	units/mm^2
vol	51	I4	units/mm^2
DF	55	I4	units/mm^2
L	59	I4	units/mm^2
W	63	I4	units/mm^2
D	67	I4	units/mm^2
NS	71	I2	units/mm^2
Area	73	I7	units/mm^2

Tract: C-a
Monitoring Activity: Aquatic - Physical
Format: j16.15
Period Covered: 1982

Parameters	Col.	Format	Units
	Card 1		
station	1	A5	
sample date	6	I6	
sample time	12	I4	
air temp	16	I5	
Est WP	21	I5	
Est WS	26	I5	
% cloud cover	31	F3.2	
water temp rep 1	36	I3	
water temp rep 2	39	I3	
water temp rep 3	42	I4	
conductivity rep 1	46	I4	
conductivity rep 2	50	I4	
conductivity rep 3	54	I4	
dissolved oly rep 1	58	I3	
dissolved oly rep 2	61	I3	
dissolved oly rep 3	64	I3	
ph rep 1	67	I3	
ph rep 2	70	I3	
ph rep 3	73	I3	
calcu flow	76	I5	
	Card 2		
visual turbidity	1	A10	
turbidity rep 1	11	I5	
turbidity	16	I5	
total alk rep 1	21	I4	
total alk rep 2	25	I4	
phenyl alk rep 1	29	I4	
phenyl alk rep 2	33	I4	
stream width	37	I4	meters
substrate composition index	41	I5	
flow index	46	I5	
% riparian cover	51	I5	
bank vegetation rating	56	I5	
bank stability rating	61	I5	
bank condition rating	66	I5	
stream stability ratingh	71	I5	
stream condition rating	76	I5	

Ca_md Format

Tract: C-a
Monitoring Activity: Aquatic - Benthos
Format: j16.16
Period Covered: 1982

Parameter	Col.	Format	Units
date	1	3I2	
station	7	A4	
collectiom method	11	A2	
conversion factor	13	F4.1	$no./m^2$
species code	17	I6	
count rep 1	23	I5	
count rep 2	28	I5	
count rep 3	33	I5	
transect type	38	A1	

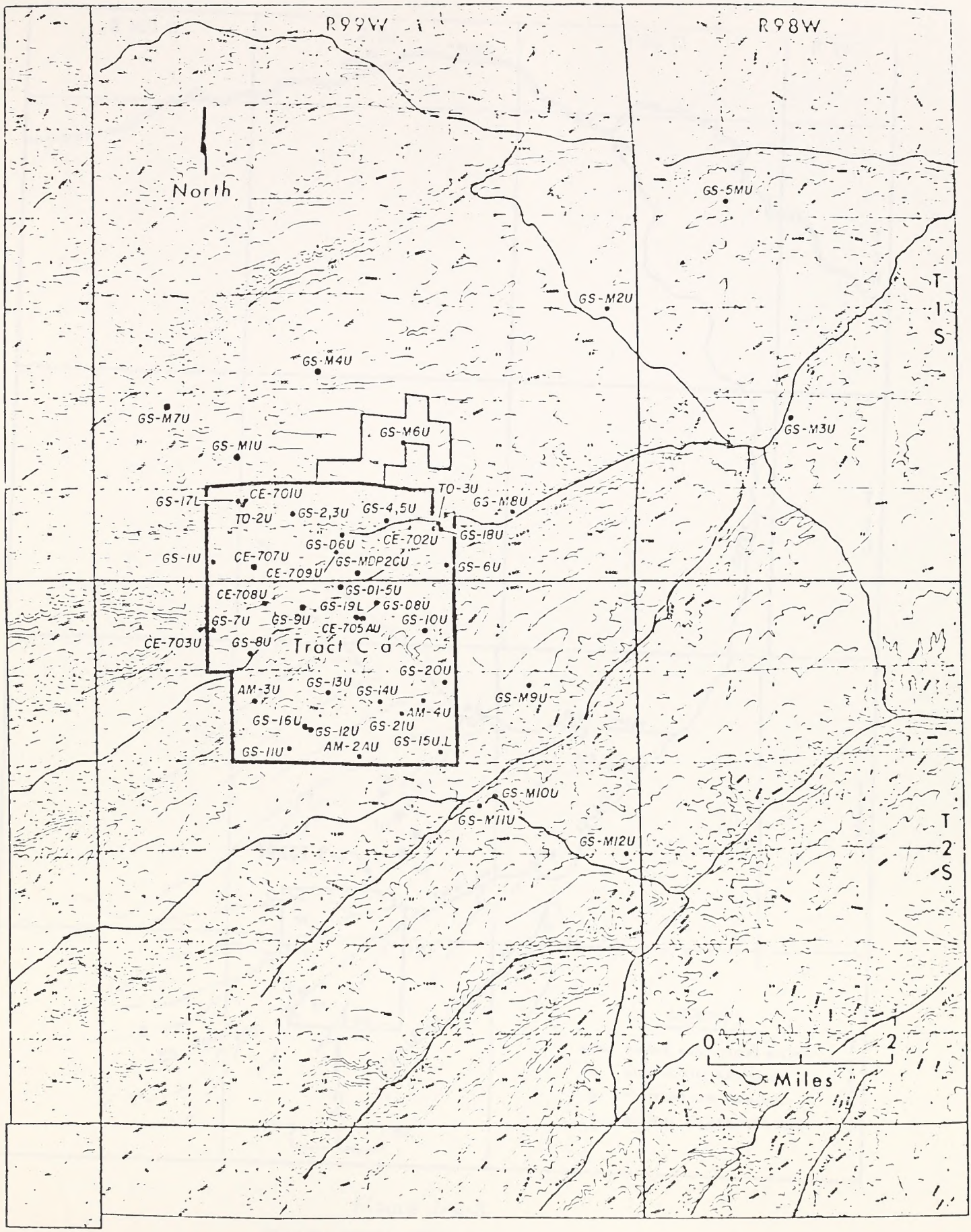


Figure 6-3
Deep Aquifer Monitoring Stations

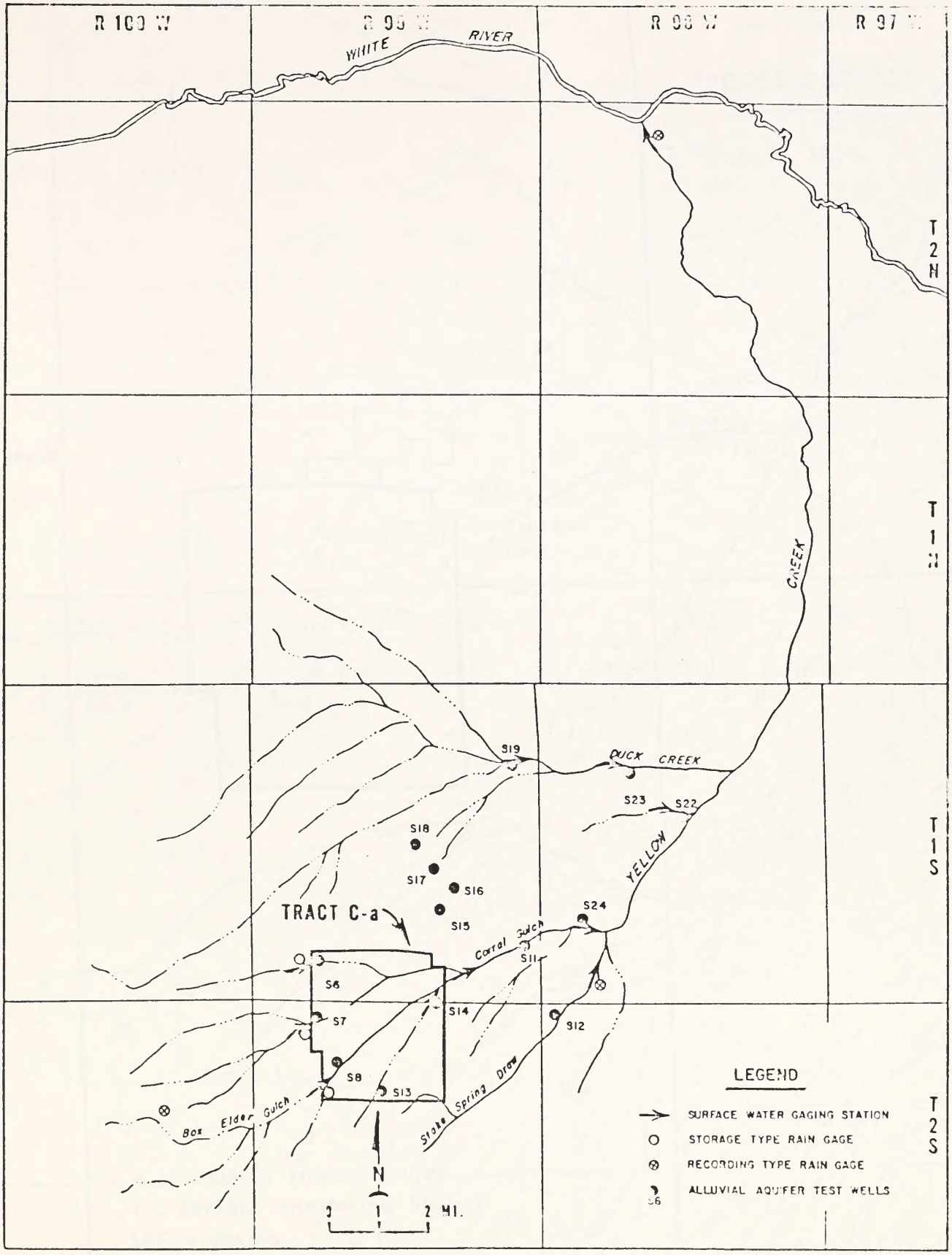


Figure 7-2-8

YELLOW CREEK DRAINAGE BASIN

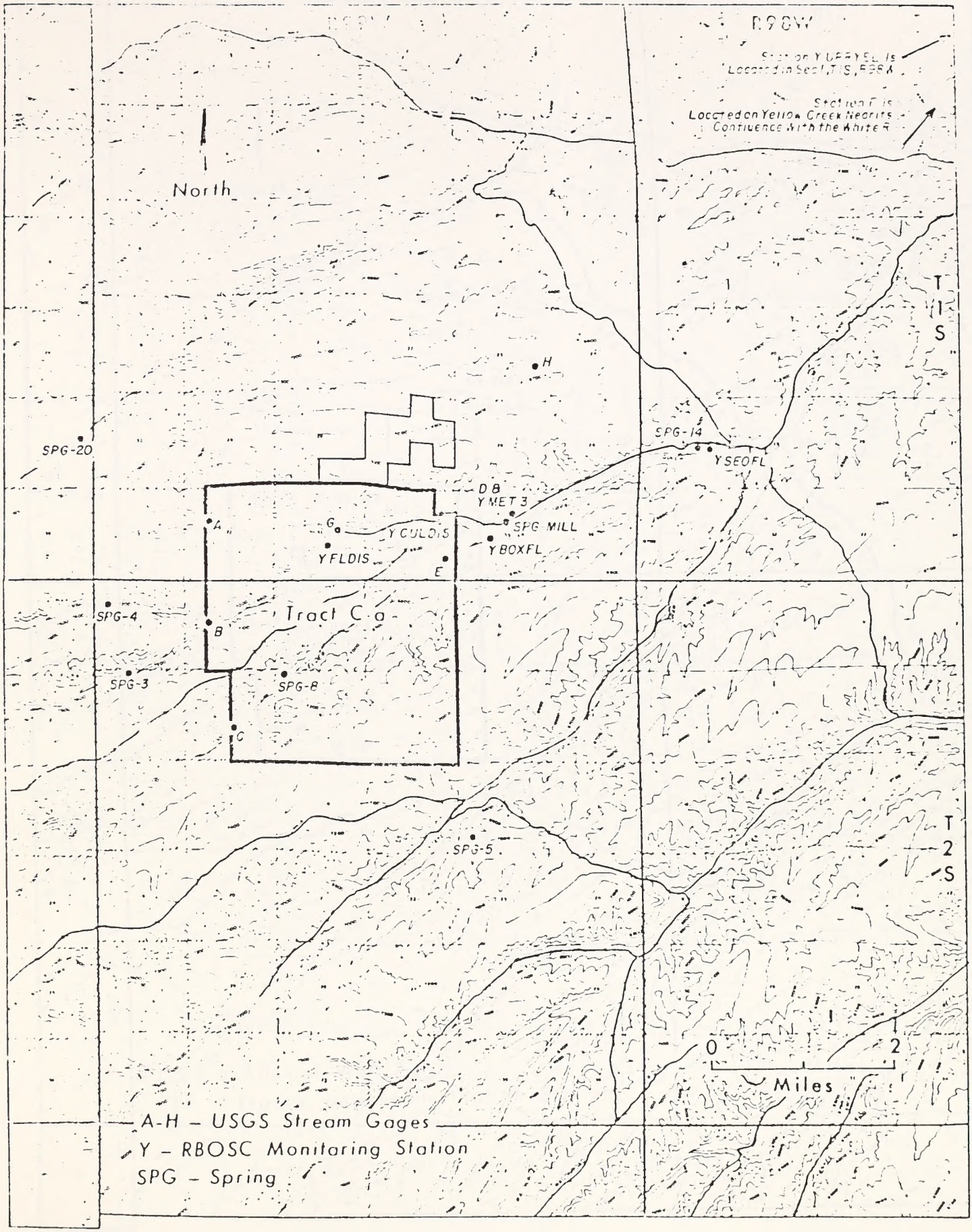


Figure 6-1
Surface Discharge Monitoring Stations

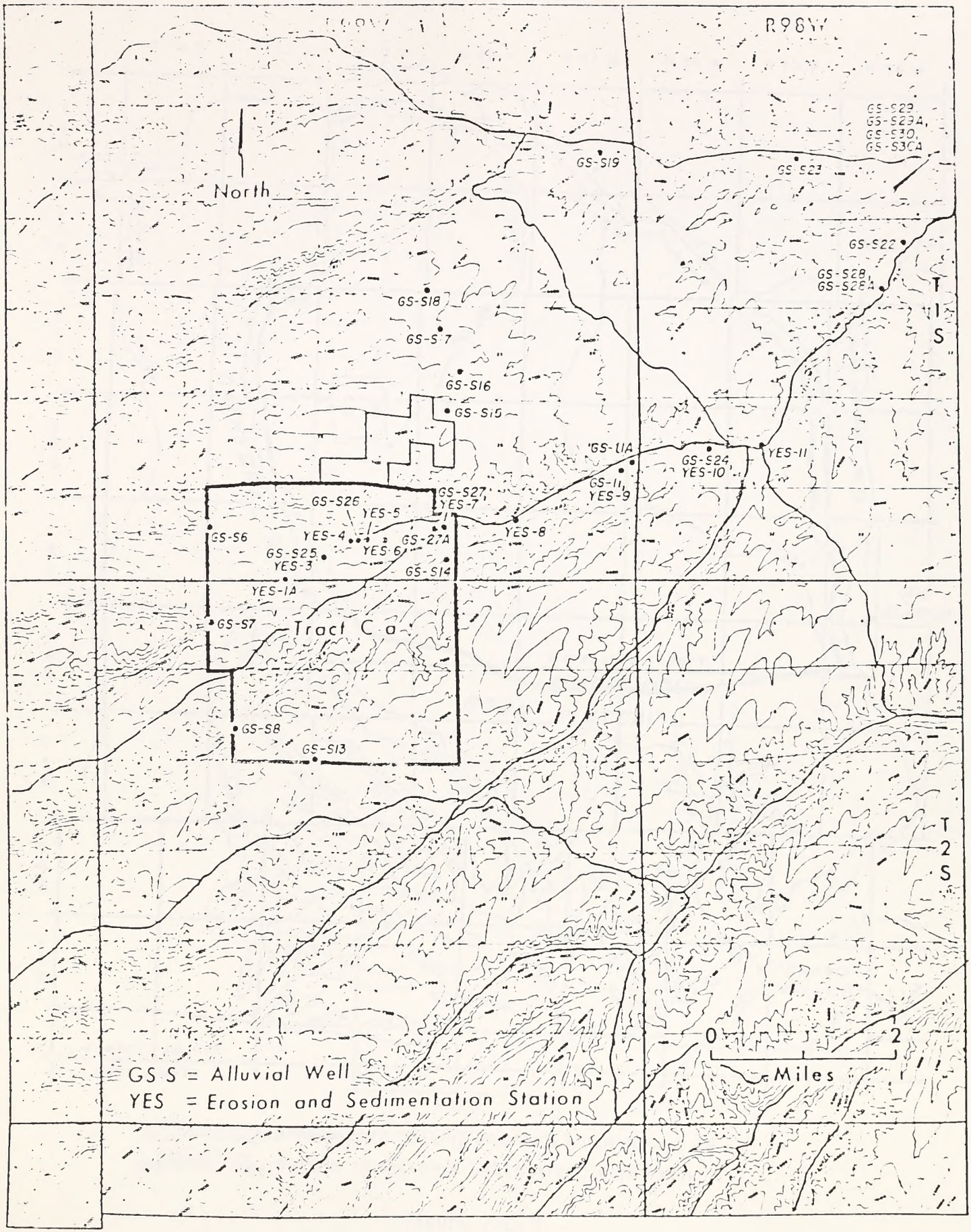


Figure 6-2
Alluvium and Erosion/Sedimentation Monitoring Stations

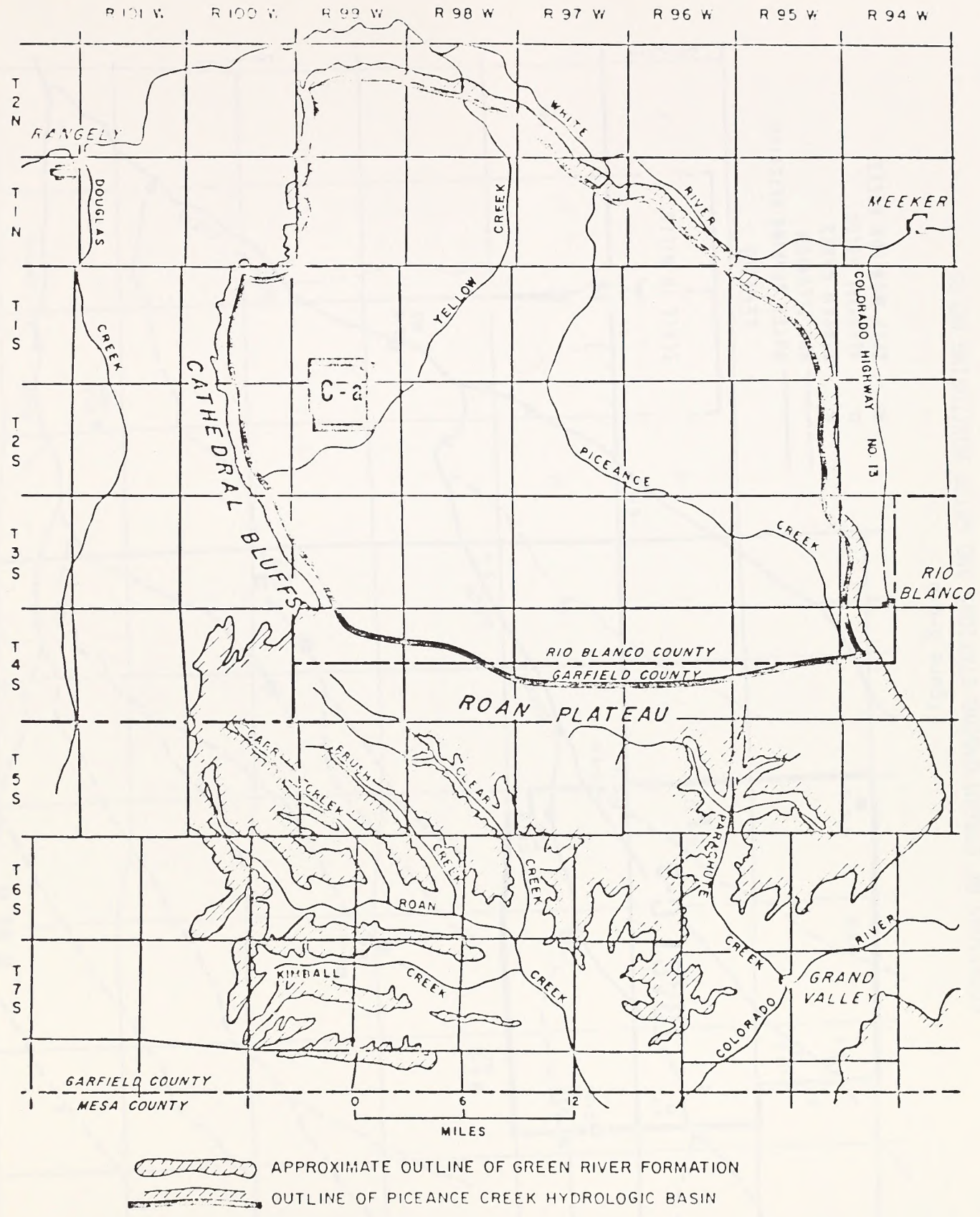


Figure 7-2- 7

PICEANCE CREEK BASIN HYDROLOGIC BASIN

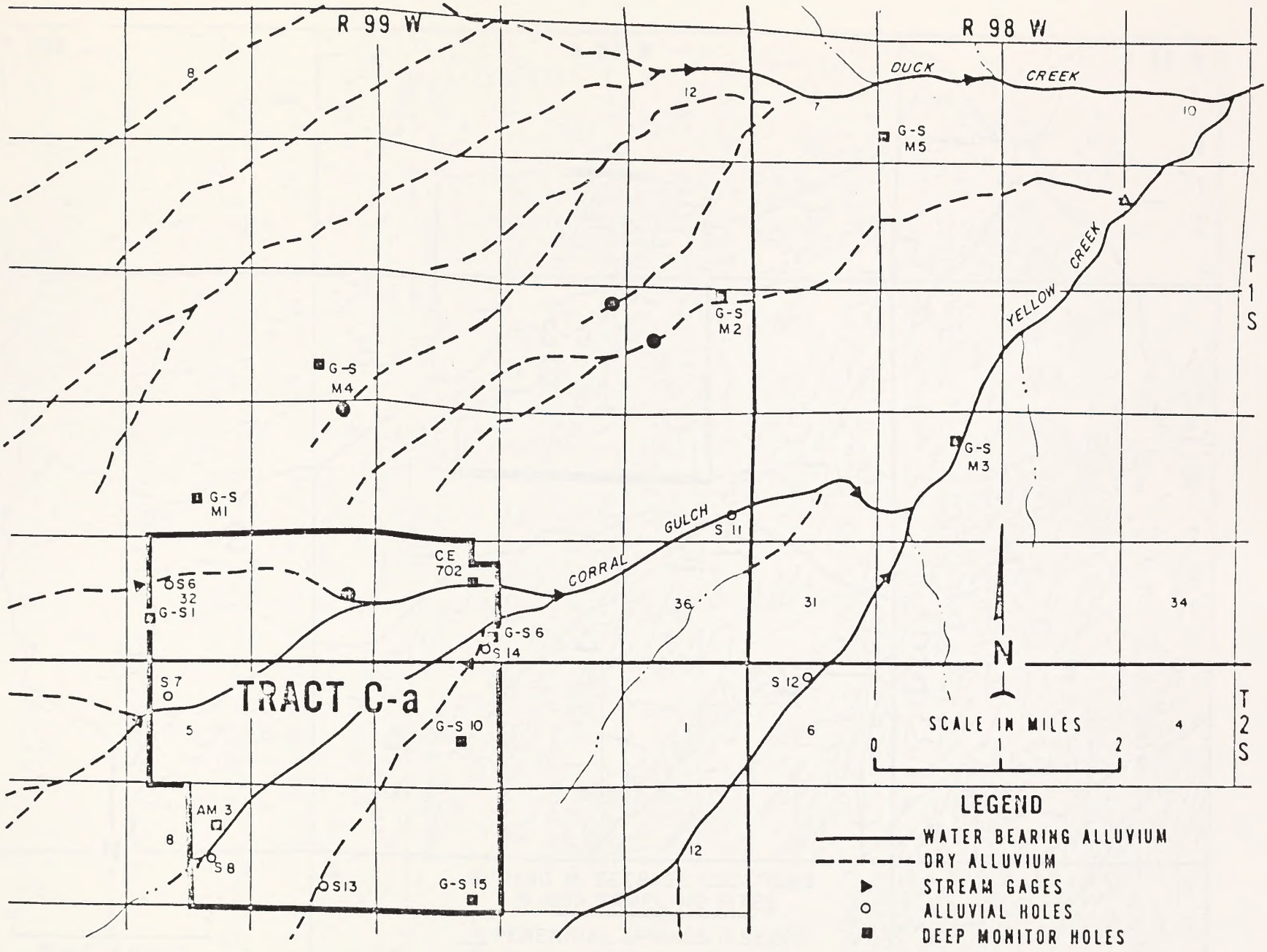


Figure 8-6-6

LOCATIONS OF STREAM GAGING STATIONS AND WATER MONITORING HOLES

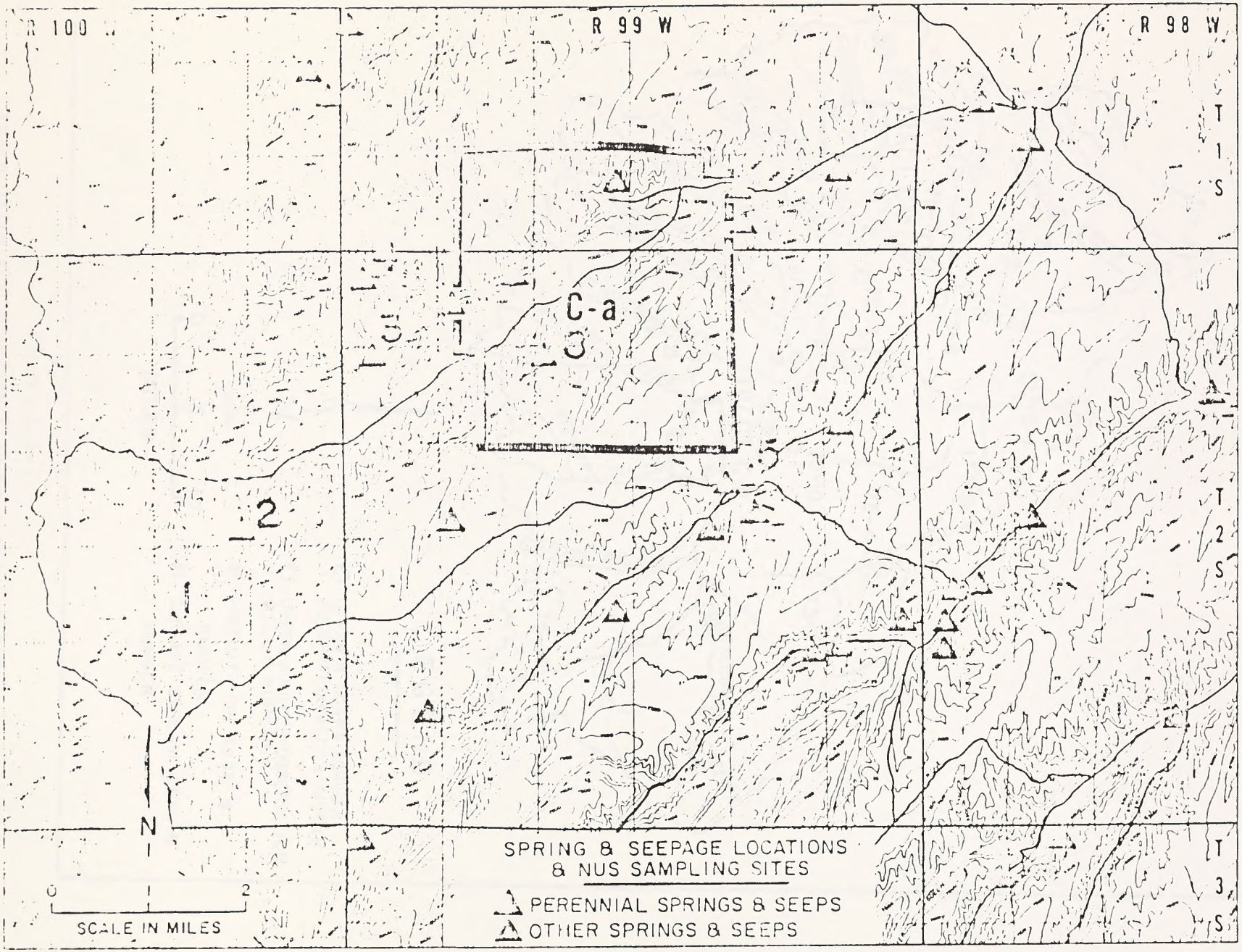


Figure 7-2-9

LOCATIONS OF SPRINGS AND SEEPS IN THE STUDY AREA

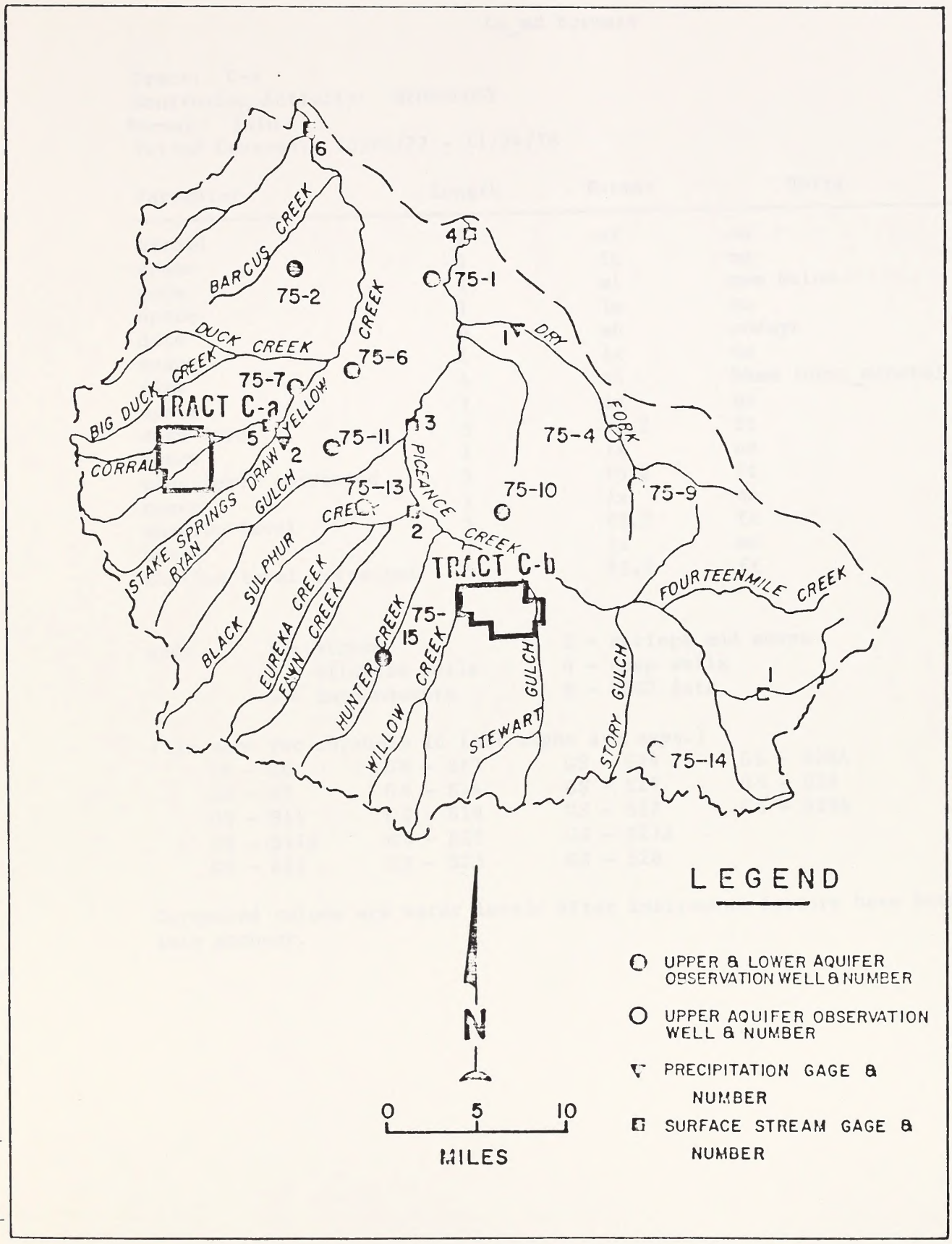


Figure 8-6-7

RBOSP WATER AUGMENTATION PLAN MONITORING PROGRAM

Ca_md Formats

Tract: C-a
Monitoring Activity: HYDROLOGY
Format: lalu
Period Covered: 10/10/77 - 11/24/78

Parameter	Length	Format	Units
coreid	7	a7	na
space	1	1x	na
code	1	a1	see below
space	1	1x	na
date	6	a6	modayr
space	1	1x	na
time	4	a4	hhmm (hour_minute)_24_hour
space	1	1x	na
deep level	5	f5.2	ft
space	1	1x	na
deep level corrected	5	f5.2	ft
space	1	1x	na
shallow level	5	f5.2	ft
space	1	1x	na
shallow level corrected	5	f5.2	ft

code
1 - stream
2 - springs and seeps
3 - alluvial wells
4 - deep wells
5 - impoundments
6 - USGS data

File name for corehole id (all alpha are caps.)

GS - S6	GS - S13	GS - S24	GS - S28A
GS - S7	GS - S14	GS - S27	GS - S29
GS - S11	GS - S19	GS - S27	GS - S29A
GS - S11A	GS - S22	GS - S27A	
GS - S12	GS - S23	GS - S28	

Corrected values are water levels after instrument factors have been taken into account.

Ca_md Formats

Tract: C-a
Monitoring Activity: HYDROLOGY
Format: pmpda
Period Covered: 05/24/78 - 11/17/78

Parameter	Length	Format	Units
coreid	10	a10	alphanumeric
space	1	1x	na
code	1	a1	integer - see below
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
time	4	a4	hhmm
space	1	1x	na
water.level	8	f8.3	ft
space	1	1x	na
temperature	8	f8.3	centigrade
space	1	1x	na
conductivity	8	f8.3	micro_mhos
space	1	1x	na
ph	8	f8.3	-

coreid S - shallow
D - deep

code 1 - stream
2 - springs and seeps
3 - alluvial wells
4 - deep wells
5 - impoundments
6 - USGS data

Tract: C-a
Monitoring Activity: HYDROLOGY

Format: pmp28
Period Covered: 01/09/78 - 05/31/79

Parameter	Length	Format	Units
coreid	8	a8	-
space	1	1x	na
type.code	1	a1	-
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
time	4	a4	hhmm
space	1	1x	na
flow	8	f8.2	-
space	1	1x	na
conductivity	8	f8.2	micro_mhos
space	1	1x	na
ph	8	f8.2	-
space	1	1x	na
dissolved.oxygen.content	8	f8.2	%

The coreid is an alphanumeric string up to 8 characters in length. If the last character is a 'S', the data is for the shallow well location and if it is a 'D', the data is for the deep well location.

Ca_md Formats

Tract: C-a
Monitoring Activity: HYDROLOGY
Format: ldep
Period Covered: 4/19/77 - 11/28/78

Parameter	Length	Format	Units
coreid	10	a10	alphanumeric
space	1	1x	na
code	1	a1	integer - see below
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
time	4	a4	hhmm
space	1	1x	na
deep.level	8	f8.3	ft
space	1	1x	na
deep.level.corrected	8	f8.3	ft
space	1	1x	na
shallow.level	8	f8.3	ft
space	1	1x	na
shallow.level.corrected	8	f8.3	ft

code
1 - stream
2 - springs and seeps
3 - alluvial wells
4 - deep wells
5 - impoundments
6 - USGS data

Ca_md Formats

Tract: C-a
Monitoring Activity: HYDROLOGY
Format: erod28
Period Covered: 12/08/78 - 5/30/79

Parameter	Length	Format	Units
Record 1			
space	1	1x	na
station.id	2	a2	-
space	2	2x	na
time	4	a4	hhmm
space	2	2x	na
date	6	a6	mmddyy
space	2	2x	na
flow	20	a20	alpha.description
space	2	2x	na
height	4	f4.2	ft
space	2	2x	na
length	5	f5.2	ft
space	2	2x	na
number	3	i3	number.of values to follow
Record 2			
values	6	f6.2	-
values	6	f6.2	-

etc. until number of values has been read

Tract: C-a
Monitoring Activity: HYDROLOGY
Format: erodl
Period Covered: 6/12/78 - 11/17/78

Parameter	Length	Format	Units
Record 1			
space	1	1x	na
station.id	2	a2	-
space	2	2x	na
time	4	a4	hhmm
space	2	2x	na
date	6	a6	mmddyy
space	2	2x	na
flow	20	a20	alpha.description
space	2	2x	na
height	4	f4.2	ft
space	2	2x	na
length	5	f5.2	ft
space	2	2x	na
number	3	i3	number.of.values.to.follow
Record 2			
values	6	f6.2	-
values	6	f6.2	-

etc. until number of values has been reached.

Ca_md Formats

Tract: C-a
Monitoring Activity: HYDROLOGY
Format: usgscn
Period Covered: 6/76 - 5/78

Parameter	Length	Format	Units
space	1	1x	na
station	8	a8	numeric
space	2	2x	na
latitude	8	f8.4	degrees
space	2	2x	na
longitude	8	f8.4	degrees
space	2	2x	na
month	2	i2	numeric
space	2	2x	na
year	4	a4	4.digit.year
space	2	2x	na
number.card	2	i2	days.of.month.recorded
space	2	2x	na
temperature	5	i5	-
space	2	2x	na
type	5	i5	type.of.data.max.min.mean
space	2	2x	na
value	7	f7.2	
etc. for 7 more values			

See WATSTOR book 1 for more detail.

Ca_md Formats

Tract: C-a
Monitoring Activity: HYDROLOGY
Format: usgs
Period Covered: 6/24/76-4/24/79

Parameter	Length	Format	Units
space	1	1x	na
station	8	a8	numeric
space	2	2x	na
latitude	8	f8.4	degrees.latitude
space	2	2x	na
longitude	8	f8.4	degrees.longitude
space	2	2x	na
date	6	a6	mmddyy
space	2	2x	na
time	4	a4	hhmm
space	2	2x	na
code	5	a5	-
space	2	2x	na
value	10	e10.4	-
space	2	2x	na
code	5	a5	-
space	2	2x	na
value	10	e10.4	-
space	2	2x	na
code	5	a5	-
space	2	2x	na
value	10	e10.4	-
space	2	2x	na
code	5	a5	-
space	2	2x	na
value	10	e10.4	-

See WATSTOR book 3 for code descriptions.

Ca_md Formats

Tract: C-a
Monitoring Activity: HYDROLOGY
Format: seep
Period Covered: 10/10/77 - 9/21/78

Parameter	Length	Format	Units
springs.and.seeps.id	10	a10	alphanumeric
space	1	1x	na
code	1	a1	integer - see below
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
time	4	a4	hhmm
space	1	1x	na
temperature	8	f8.3	centigrade
space	1	1x	na
conductivity	8	f8.3	micro-mhos
space	1	1x	na
ph	8	f8.3	-
space	1	1x	na
doc - dissolved oxygen content	8	f8.3	%

code
1 - stream
2 - springs and seeps
3 - alluvial wells
4 - deep wells
5 - impoundments
6 - USGS data

Ca_md Formats

Tract: C-a
Monitoring Activity: HYDROLOGY
Format: stream
Period Covered: 02/03/78-11/10/78

Parameter	Length	Format	Units
stream.id	10	a10	alphanumeric
space	1	1x	na
code	1	a1	integer - see below
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
time	4	a4	hhmm
space	1	1x	na
temperature	8	f8.3	centigrade
space	1	1x	na
conductivity	8	f8.3	micro-mhos
space	1	1x	na
ph	8	f8.3	-
space	1	1x	na
doc - dissolved oxygen content	8	f8.3	%

code
1 - stream
2 - springs and seeps
3 - alluvial wells
4 - deep wells
5 - impoundments
6 - USGS data

Tract: C-a
Monitoring Activities: Hydrology
Format: w82
Period Covered: 1/1/82 - 12/14/82

Parameters	Col.	Format	Units
station	1	A15	alpha
type	16	A4	alpha
date	20	A6	mmddyy
time	26	A4	hhmm
depth	30	F6.1	ft
temperature	36	F6.1	centigrade
specific conductance	42	F6.0	micro-mhos
ph	48	F4.1	
flow	52	F6.1	
total suspended solids	58	I4	
pressure	62	I5	
hole	67	A5	alpha

field filled with 9's means no data recorded -
station, type, date or time filled with 0's means
no designation recorded -
hole will be XXX if depth has value
otherwise will contain dry, ice or iced

Ca Formats

Tract: C-a
Monitoring Activity: Water Chemistry
Format: dmwq81, spwq81
Period Covered: 79/81, 79/81

Parameter	Col.	Format	Units
date	2	3I2	mo-da-yr
idSTA, station (A3, A8)	8	A8	-
temp	23	F6.1	degrees C
ph	29	F6.1	standard units
spc_cond	35	F6.0	micro_umhos/cm
Ca	41	F6.0	mg/1
Mg	47	F6.0	mg/1
Na	53	F6.0	mg/1
K	59	F6.2	mg/1
Fe	68	F6.2	mg/1
HCO3	74	F7.2	mg/1

Record 2

Parameter	Col.	Format	Units
CO3	1	F6.2	mg/1
OH	7	F6.2	mg/1
SO_4	13	F6.0	mg/1
Cl	19	F7.2	mg/1
TSS	26	F6.0	mg/1
TCN	32	F6.2	
TSO4	38	F6.2	
TDS	44	F6.0	mg/1
ALK	50	F6.0	mg/1
Hard	56	F6.0	mg/1
ORTHOP	62	F6.2	mg/1
PO4	68	F6.2	mg/1

-99. no data taken only used to make data base similar.

Record 3

Parameter	Col.	Format	Units
KJEL	1	F6.1	mg/1
NH3	7	F6.2	mg/1
NO2	13	F6.3	mg/1
NO3	19	F6.3	mg/1
F	25	F6.2	mg/1
S	31	F6.1	mg/1
SO3	37	F6.0	mg/1
Br	43	F6.1	mg/1
TOC	49	F6.0	mg/1
DOC	55	F6.0	mg/1
Cn	61	F6.3	mg/1
PHENOL	67	F6.2	mg/1

Record 4

Parameter	Col.	Format	Units
OG	1	F6.0	mg/1
BOD	7	F6.0	-
COD	13	F6.0	-
Al	19	F6.1	mg/1
Sb	25	F6.2	
As	31	F6.2	mg/1
Ba	37	F6.1	mg/1
Be	43	F6.2	mg/1
Bi	49	F6.2	mg/1
B	55	F6.2	mg/1
Cd	61	F6.1	mg/1
Cr	67	F6.2	mg/1

Record 5

Parameter	Col.	Format	Units
Cu	1	F6.3	mg/1
Ga	7	F6.1	mg/1
Ge	13	F6.1	mg/1
Pb	19	F6.3	mg/1
Li	25	F6.2	mg/1
Mn	31	F6.2	mg/1
Hg	37	F6.2	mg/1
MOL	43	F6.1	mg/1
Ni	49	F7.2	mg/1
Se	55	F6.2	mg/1
SiO2	61	F6.0	mg/1
Ag	67	F6.1	mg/1

Record 6

Parameter	Col.	Format	Units
Sr	1	F6.2	mg/l
Sn	7	F6.2	mg/l
Ti	13	F6.1	mg/l
W	19	F6.2	mg/l
V	25	F6.1	mg/l
Zn	31	F6.2	mg/l
Zr	37	F6.0	mg/l
Alpha	43	F6.0	p Ci/l
Beta	49	F6.0	

Record 7

Parameter	Col.	Format	Units
depth	1	F9.2	ft
fecal coliform	10	F9.2	no/100ml
MBAS	19	F9.2	mg/l
ST	28	F9.2	mg/l
total coliform	37	F9.2	no/100ml
Spg	46	F9.2	
NH3N	55	F9.2	mg/l
aquifer	64	F9.2	

C-a_md Formats

Tract: C-a
Monitoring Activity: Hydrology
Format: alph81, upph81_md, alph81, unph81
Period Covered: 1979 - 1980
1975 - 1980
1975 - 1976
1980 2 holes 2 months

Record 1

Parameter	Col.	Format	Units
sta	1	A14	
date	15	I6	mo-da-yr
type	21	A5	
con specific conductance	26	F9.2	micro_umhos/cm
flow	35	F9.2	-
other	44	F9.2	spm
ph	53	F9.2	-
rptyr (report year)	62	F9.2	std. units
temp	71	F9.2	centigrade

Record 2

Parameter	Col.	Format	Units
time	1	F9.2	
TSS	10	F9.2	mg/1
wl	19	F9.2	ft
dep	28	A1	
depth	29	A8	ft
plus	37	A1	
sp_cond	38	A10	micro_umhos
status	48	A3	
X	51	A1	
Y	52	A1	
Z	53	A1	
dam	54	A1	

no data -99.0

C-a_md Formats

Tract: C-a
Monitoring Activity: Hydrology (field hydrology)
Format: feld81, j26_1, j48_17, j48_14
Period Covered: 1981, 1983, 1984, 1984

Parameter	Col.	Format	Units
type	2	A4	
station	7	A15	
date	23	I6	mo-da-yr
wl	30	F6.1	ft
ph	36	F6.1	std. units
sp_cond	42	F6.0	umhos/cm
temp	48	F6.1	centigrade
flow	54	F6.1	gpm
TSS	60	F6.1	mg/l
pressure (only on jkc048_17md)	66	F6.1	

Tract: C-a
Monitoring Activity: Hydrology (operation physical)
Format: dmph81
Period Covered: 1980 only

Parameter	Col.	Format	Units
station	2	A15	
typsta	18	A5	
status	25	A1	
date	27	3I2	mo-da-yr
cond	33	F8.2	micro_umhos
ph	41	F8.2	std. units
q	49	F8.2	gpm
rptyr	57	F8.2	
TDS	65	F8.2	mg/l
temp	73	F8.2	centigrade
time	81	F8.2	
TSS	89	F8.2	mg/l
d	97	A1	
dam	98	A1	
plus	99	A1	
spg	100	A3	

Tract: C-a
Monitoring Activity: Hydrology (Springs & Seeps)
Format: seep81
Period Covered: 10/77 - 5/29/80

Parameter	Col.	Format	Units
station	1	A8	N/A
date	9	3I2	mo-da-yr
con (specific conductance)	15	F8.2	micro_umhos
ph	23	F8.2	std. units
Q	31	F8.2	gpm
rptyr	39	F8.2	-
TDS	47	F8.2	mg/l
temp	55	F8.2	centigrade
time	63	F8.2	-
TSS	71	F8.2	mg/l

Tract: C-a
Monitoring Activity: Hydrology (USGS gaging stat)
Format: usgs81
Period Covered: 3/74 -

Parameter	Col.	Format	Units
station	2	A7	
date	10	A6	mo-da-yr
TType	17	A1	
flow	18	F9.3	CFS
turb 70 (method 1)	27	F9.3	NTU
turb 76 (method 2)	36	F9.3	NTU
color	45	F9.3	pt-co
sp_cond	54	F9.3	umhos
Do	63	F9.3	mg/1
BOD	72	F9.3	mg/1
COD	81	F9.3	mg/1
ph	90	F9.3	standard units
CO_2	99	F9.3	mg/1
alk	108	F9.3	mg/1
HCO3	117	F9.3	mg/1
CO3	126	F9.3	mg/1
oil'550 (oil & grease method 1)	135	F9.3	mg/1
oil'556 (oil & grease method 2)	144	F9.3	mg/1
N-tot	153	F9.3	mg/1
N-DIS	162	F9.3	mg/1
torg_(N)	171	F9.3	mg/1
org_(N)	180	F9.3	mg/1
NH3_(N)	189	F9.3	mg/1
TNH3_(N)	198	F9.3	mg/1
NO2_DIS-(N)	207	F9.3	mg/1
NO3_DIS-(N)	216	F9.3	mg/1
KJEL 623	225	F9.3	mg/1
KJEL 625	234	F9.3	mg/1
TNO2 + NO3-(N)	243	F9.3	mg/1
NO2 + NO3-(N)	252	F9.3	mg/1
TPO4 - (P)	261	F9.3	mg/1
O_PO4	270	F9.3	mg/1
TOT_P	279	F9.3	mg/1
DIS_P	288	F9.3	mg/1
DORTHOP	297	F9.3	mg/1
TOC	306	F9.3	mg/1
DOC	315	F9.3	mg/1
SUSP_OC (suspended organic carbon)	324	F9.3	mg/1
cyanide	333	F9.3	mg/1
THS (total sulfide)	342	F9.3	mg/1
HS (sulfide)	351	F9.3	mg/1
T_hard	360	F9.3	mg/1
NC_hard	369	F9.3	mg/1
Ca	378	F9.3	mg/1

Parameter	Col.	Format	Units
Mg	387	F9.3	mg/1
Na	396	F9.3	mg/1
SAR	405	F9.3	no units
PER Na	414	F9.3	%
Na + K	423	F9.3	mg/1
K	432	F9.3	mg/1
CL	441	F9.3	mg/1
SO4	450	F9.3	mg/1
F	459	F9.3	mg/1
SIO4	468	F9.3	mg/1
As	477	F9.3	ug/1
Ba	486	F9.3	ug/1
Be	495	F9.3	ug/1
Bi	504	F9.3	ug/1
B	513	F9.3	ug/1
Cd	522	F9.3	ug/1
Cr	531	F9.3	ug/1
Cu	540	F9.3	ug/1
Fe	549	F9.3	ug/1
Pb	558	F9.3	ug/1
Mn	567	F9.3	ug/1
Mo	576	F9.3	ug/1
Ni	585	F9.3	ug/1
Ag	594	F9.3	ug/1
V	603	F9.3	ug/1
Zn	612	F9.3	ug/1
Sn	621	F9.3	ug/1
Al	630	F9.3	ug/1
Ga	639	F9.3	ug/1
Ge	648	F9.3	ug/1
Li	657	F9.3	ug/1
Se	666	F9.3	ug/1
Ti	675	F9.3	ug/1
Zr	684	F9.3	ug/1
ODOR	693	F9.3	mg/1
T Col I	702	F9.3	col./100ml
F Col I	711	F9.3	col./100ml
Phenols	720	F9.3	ug/1
PCB	729	F9.3	ug/1
TDS	738	F9.3	sum of solids
TDS 2	747	F9.3	tons/days
TDS 3	756	F9.3	tons/days
NH3	765	F9.3	mg/1
NO3	774	F9.3	mg/1
NO2	783	F9.3	mg/1
Br	792	F9.3	ug/1
Hg	801	F9.3	ug/1
Sr	810	F9.3	ug/1
QM (Mean discharge)	819	F9.3	CFS
THI (Temp Hi)	828	F9.3	deg C
TLOW (Temp Low)	837	F9.3	deg C
TM (Temp Mean)	846	F9.3	deg C
CHI (Specific conductance - Hi)	855	F9.3	umhos/cm
CLOW (Specific conductance - Low)	864	F9.3	umhos/cm
CM (Specific conductance - Mean)	873	F9.3	umhos/cm

Parameter	Col.	Format	Units
SSM (suspended solid - concentration)	882	F9.3	mg/l
SLM (suspended solid - load)	891	F9.3	tons/ac - ft

no data 999.99

C-a_md Formats

Tract: C-a
Monitoring Activity: Hydrology (erosion & sedimentation)
Format: erod81
Period Covered:

Parameter	Col.	Format	Units
station	2	A6	
date	8	A6	mo-da-yr
type	14	A1	
(D1 - D26)	15	26*F3.2	ft. datum line
(D27 - D52)	93	26*F3.2	ft. datum line
(D53 - D78)	171	26*F3.2	ft. datum line
(D79 - D104)	249	26*F3.2	ft. datum line
(D105 - D130)	327	26*F3.2	ft. datum line
(D131 - D156)	405	26*F3.2	ft. datum line
(D157 - D160)	483	3*F3.2	ft. datum line

Tract: C-a
Monitoring Activity: Hydrology (operations data set)
Format: dams81, j26_2
Period Covered: 1979 - 1981, 1983

Parameter	Col.	Format	Units
type	2	A4	-
station	7	A15	-
date	23	A6	mo-da-yr
depth	29	F6.1	ft
ph	35	F6.1	-
conductance	41	F6.0	micro_umhos/cm
temperature	47	F6.1	centigrade
TSS	53	F6.1	mg/1
pressure	59	F6.1	psi
flow	65	F6.1	gpm
time			

flow added in 1983, 1982
time on 1982 data

Tract: C-a
Monitoring Activity: Hydrology
Format: usgm81
Period covered: 9/74 - 9/79

Parameter	Col.	Format	Units
sta	2	F8.2	-
date	10	3I2	mo-da-yr
chi specific conductance hi	16	F8.2	microhos/cm
clow specific conductance low	24	F8.2	microhos/cm
cm specific conductance mean	32	F8.2	microhos/cm
idm	40	E10.3	
qm mean discharge	50	F8.2	cfs
slm suspended solids - load	58	F8.2	tons/ac-ft
ssm suspended solids - concentration	66	F8.2	mg/l
thi temperature hi	74	F8.2	^{o}c
tlow temperature low	82	F8.2	^{o}c
tm temperature mean	90	F8.2	^{o}c
wyr water year	98	F8.2	

C-a_md Formats

Tract: C-a
Monitoring Activity: Hydrology
Format: usgw81
Period Covered: 3/74 - 9/18/80

Parameters	Col.	Format	Units
station	2	A20	
date	23	3I2	mo-da-yr
A	30	F8.2	
Ag	38	F8.2	ug/l
Al	46	F8.2	ug/l
aldrin	54	F8.2	ug/l
alk	62	F8.2	mg/l
alpha 15 gross alpha, dissolved	70	F8.2	pCi/l asu
alpha 16 "" "",total suspended	78	F8.2	pCi/l asu
alpha 30 "" "", dissolved	86	F8.2	mg/l
alpha 40 "" "", total suspended	94	F8.2	mg/l asu
As	102	F8.2	ug/l
B	110	F8.2	ug/l
Ba	118	F8.2	ug/l
Be	126	F8.2	ug/l
benzhex	134	F8.2	
beta 15 gross alpha, dissolved	142	F8.2	pCi/l asu
beta 16 "" "",total suspended	150	F8.2	pCi/l asu
beta 50 "" "", dissolved	158	F8.2	mg/l
beta 60 "" "", total suspended	166	F8.2	mg/l asu
Bi	174	F8.2	ug/l
BOD	182	F8.2	mg/l
Br	190	F8.2	ug/l
C	198	F8.2	
Ca	206	F8.2	ug/l
Cd	214	F8.2	ug/l
chlordane	222	F8.2	mg/l
Cl	230	F8.2	mg/l
CO_2	238	F8.2	mg/l
CO_3	246	F8.2	mg/l
COD	254	F8.2	mg/l
color	262	F8.2	plat.cob.units
Cr	270	F8.2	ug/l
Cu	278	F8.2	ug/l
cyanide	286	F8.2	mg/l
D	294	F8.2	
ddd	302	F8.2	ug/l
dde	310	F8.2	ug/l
ddt	318	F8.2	ug/l
diazinon	326	F8.2	ug/l
dieldron	334	F8.2	ug/l
dis_p	342	F8.2	mg/l
DO	350	F8.2	mg/l
DOC	358	F8.2	mg/l
dorthrop dissolved ortho-P	366	F8.2	mg/l
endosulfan	374	F8.2	ug/l

Parameter	Col.	Format	Units
endrin	382	F8.2	ug/l
ethion	390	F8.2	ug/l
F	398	F8.2	mg/l
F_coli	406	F8.2	col./100ml
F_strep	414	F8.2	col./100ml
FC31625 fecal coli,method 31625	422	F8.2	col./100ml
Fe	430	F8.2	ug/l
flow	438	F8.2	cfs
Ga	446	F8.2	ug/l
Ge	454	F8.2	ug/l
hard-total	462	F8.2	mg/l
HCO3	470	F8.2	mg/l
Heptachlor	478	F8.2	ug/l
Heptepx	486	F8.2	ug/l
Hg	494	F8.2	ug/l
Hs (sulfide)	502	F8.2	mg/l
K	510	F8.2	mg/l
KJEL623 method	518	F8.2	mg/l
KJEL625 method	526	F8.2	mg/l
Li	534	F8.2	ug/l
M_Para (methyl paration)	542	F8.2	ug/l
M_Trith (methyl trithion)	550	F8.2	ug/l
malathion	558	F8.2	ug/l
MBAS	566	F8.2	mg/l
Mg	574	F8.2	mg/l
mirey	582	F8.2	ug/l
Mn	590	F8.2	ug/l
mol	598	F8.2	ug/l
N_DIS	606	F8.2	mg/l
N_tot	614	F8.2	mg/l
Na	622	F8.2	mg/l
Na+K	630	F8.2	mg/l
Nc_Hard non-carb-hardness	638	F8.2	mg/l
NH3	646	F8.2	mg/l
NH3_N	654	F8.2	mg/l
Ni	662	F8.2	ug/l
NO_2	670	F8.2	mg/l
NO_3	678	F8.2	mg/l
NO_2_DIS	686	F8.2	mg/l
NO_2_NO_3	694	F8.2	mg/l
NO_3_DIS	702	F8.2	mg/l
O_PO_4	710	F8.2	mg/l
ODOR	718	F8.2	mg/l
OIL 550 oil & grease method	726	F8.2	mg/l
OIL 556 oil & grease method	734	F8.2	mg/l
ORG_N	742	F8.2	mg/l
Parathion	750	F8.2	ug/l
Pb	758	F8.2	ug/l
PCB	766	F8.2	ug/l
PER_NA percent sodium	774	F8.2	%
Perthane	782	F8.2	ug/l
Pest	790	F8.2	
ph	798	F8.2	std. units

Parameter	Col.	Format	Units
phenol	806	F8.2	ug/l
P2_4_D	814	F8.2	
P2_4_5T	822	F8.2	
RA 9510 method radium 226	830	F8.2	pCi/l
RA 9511 method radium 226	838	F8.2	pCi/l
SAR	846	F8.2	ho units
Se	854	F8.2	ug/l
SILVEX	862	F8.2	ug/l
SIO2	870	F8.2	mg/l
Sn	878	F8.2	ug/l
SO_4	886	F8.2	ug/l
Sp_Cond	894	F8.2	microumhos/cm
Sr	902	F8.2	ug/l
SUSP_OC suspended organic carbon	910	F8.2	mg/l
T_COL I	918	F8.2	colonies/100ml
T_HARD	926	F8.2	mg/l
TC total carbon	934	F8.2	mg/l
TDS sum of solids	942	F8.2	
TDS 2 tons per day	950	F8.2	T/day
TDS 3 tons per acre foot	958	F8.2	T/ac ft
temp	966	F8.2	deg C
THS total sulfide	974	F8.2	mg/l
Ti	982	F8.2	ug/l
TN_NO3 total N as NO3	990	F8.2	mg/l
TNH3_N total NH3 as N	998	F8.2	mg/l
NO2 + NO3	1006	F8.2	mg/l
TOC	1014	F8.2	mg/l
TORG_N	1022	F8.2	mg/l
TOT_P	1030	F8.2	mg/l
TOT_P2	1038	F8.2	mg/l
TOX_AP toxaphene	1046	F8.2	ug/l
TPO4	1054	F8.2	mg/l
TRITH (trition)	1062	F8.2	ug/l
TURB 70 method	1070	F8.2	NTU
TURB 76 method	1078	F8.2	NTU
U	1086	F8.2	ug/l
V	1094	F8.2	ug/l
WYR (water year)	1102	F8.2	
X	1110	F8.2	
Y	1118	F8.2	
Z	1126	F8.2	
Zn	1134	F8.2	ug/l
Zr	1142	F8.2	ug/l

Ca Formats

Tract: C-a
Monitoring Activity: Water Chemistry
Format: alwq81, upwq81, unwq81, lwq81
Period Covered: 75/81, 75/81, 75/81, 75/81

Parameter	Col.	Format	Units
date	2	3I2	mo-da-yr
idSTA, station (A3, A8)	8	A8	-
temp	23	F6.1	degrees C
ph	29	F6.1	standard units
spc_cond	35	F6.0	micro_umhos/cm
Ca	41	F6.0	mg/l
Mg	47	F6.0	mg/l
Na	53	F6.0	mg/l
K	59	F6.2	mg/l
Fe	68	F6.2	mg/l
HCO3	74	F8.2	mg/l

Record 2

Parameter	Col.	Format	Units
CO3	1	F7.2	mg/l
OH	7	F6.2	mg/l
SO_4	13	F6.0	mg/l
Cl	19	F7.2	mg/l
TSS	26	F6.0	mg/l
TCN	32	F6.2	
TSO4	38	F6.2	
TDS	44	F6.0	mg/l
ALK	50	F6.0	mg/l
Hard	56	F6.0	mg/l
ORTHOP	62	F6.2	mg/l
PO4	68	F6.2	mg/l

-99. no data taken only used to make data base similar.

Record 3

Parameter	Col.	Format	Units
KJEL	1	F6.1	mg/l
NH3	7	F6.2	mg/l
NO2	13	F7.3	mg/l
NO3	19	F7.3	mg/l
F	25	F6.2	mg/l
S	31	F6.1	mg/l
SO3	37	F6.0	mg/l
Br	43	F6.1	mg/l
TOC	49	F6.0	mg/l
DOC	55	F6.0	mg/l
Cn	61	F7.3	mg/l
PHENOL	67	F6.2	mg/l

Record 4

Parameter	Col.	Format	Units
OG	1	F6.0	mg/l
BOD	7	F6.0	-
COD	13	F6.0	-
Al	19	F6.1	mg/l
Sb	25	F6.2	
As	31	F6.2	mg/l
Ba	37	F6.1	mg/l
Be	43	F6.2	mg/l
Bi	49	F6.2	mg/l
B	55	F6.2	mg/l
Cd	61	F6.1	mg/l
Cr	67	F6.2	mg/l

Record 5

Parameter	Col.	Format	Units
Cu	1	F7.3	mg/l
Ga	7	F6.1	mg/l
Ge	13	F6.1	mg/l
Pb	19	F7.3	mg/l
Li	25	F6.2	mg/l
Mn	31	F6.2	mg/l
Hg	37	F6.2	mg/l
MOL	43	F6.1	mg/l
Ni	49	F7.2	mg/l
Se	55	F6.2	mg/l
SiO2	61	F6.0	mg/l
Ag	67	F6.1	mg/l

Record 6

Parameter	Col.	Format	Units
Sr	1	F6.2	mg/l
Sn	7	F6.2	mg/l
Ti	13	F6.1	mg/l
W	19	F6.2	mg/l
V	25	F6.1	mg/l
Zn	31	F6.2	mg/l
Zr	37	F6.0	mg/l
Alpha	43	F6.0	p Ci/l
Beta	49	F6.0	

Record 7

Parameter	Col.	Format	Units
depth	1	F9.2	ft
fecal coliform	10	F9.2	no/100ml
MBAS	19	F9.2	mg/l
ST	28	F9.2	mg/l
total coliform	37	F9.2	no/100ml
Spg	46	F9.2	
NH3N	55	F9.2	mg/l
aquifer	64	F9.2	

Tract: C-a
Monitoring Activity: Retort Abandonment_Water
Format: j26_5, j48_13
Period Covered: 1983, 1984

Parameter	Col.	Format	Units
type	1	A4	
stat	5	A10	
date	15	3I2	
WL	21	F6.1	
mmw	27	F6.0	
tgp	33	F6.0	
temp	39	F3.1	
ph	42	F3.1	
sp_cond	45	F6.0	
NH3	51	F3.1	
F	54	F3.1	
S	57	F4.0	
K	61	F4.0	
phe	65	F4.0	
COD	69	F4.0	
FRBRD	73	F4.0	

Ca Formats

Tract: C-a
Monitoring Activity: Water Chemistry
Format: j26_3,j26_4,j26_6,j16_13,j49_1,j49_2
Period Covered: 1983, 1983, 1983, 1982, 1984, 1984

Parameter	Col.	Format	Units
date	2	3I2	mo-da-yr
station	8	A15	-
temp	23	F6.1	degrees C
ph	29	F6.1	standard units
spc_cond	35	F6.0	micro_umhos/cm
Ca	41	F6.0	mg/l
Mg	47	F6.0	mg/l
Na	53	F6.0	mg/l
K	59	F6.2	mg/l
Fe	68	F6.2	mg/l
HCO3	74	F6.2	mg/l

Record 2

Parameter	Col.	Format	Units
CO3	1	F6.2	mg/l
OH	7	F6.2	mg/l
SO_4	13	F6.0	mg/l
Cl	19	F7.2	mg/l
TSS	26	F6.0	mg/l
TCN	32	F6.2	
TSO4	38	F6.2	
TDS	44	F6.0	mg/l
ALK	50	F6.0	mg/l
Hard	56	F6.0	mg/l
ORTHOP	62	F6.2	mg/l
PO4	68	F6.2	mg/l

Record 3

Parameter	Col.	Format	Units
KJEL	1	F6.1	mg/l
NH3	7	F6.2	mg/l
NO2	13	F6.3	mg/l
NO3	19	F6.3	mg/l
F	25	F6.2	mg/l
S	31	F6.1	mg/l
SO3	37	F6.0	mg/l
Br	43	F6.1	mg/l
TOC	49	F6.0	mg/l
DOC	55	F6.0	mg/l
Cn	61	F6.3	mg/l
PHENOL	67	F6.2	mg/l

Record 4

Parameter	Col.	Format	Units
OG	1	F6.0	mg/l
BOD	7	F6.0	-
COD	13	F6.0	-
Al	19	F6.1	mg/l
Sb	25	F6.2	
As	31	F6.2	mg/l
Ba	37	F6.1	mg/l
Be	43	F6.2	mg/l
Bi	49	F6.2	mg/l
B	55	F6.2	mg/l
Cd	61	F6.1	mg/l
Cr	67	F6.2	mg/l

Record 5

Parameter	Col.	Format	Units
Cu	1	F6.3	mg/l
Ga	7	F6.1	mg/l
Ge	13	F6.1	mg/l
Pb	19	F6.3	mg/l
Li	25	F6.2	mg/l
Mn	31	F6.2	mg/l
Hg	37	F6.2	mg/l
MOL	43	F6.1	mg/l
Ni	49	F6.2	mg/l
Se	55	F6.2	mg/l
SiO2	61	F6.0	mg/l
Ag	67	F6.1	mg/l

Record 6

Parameter	Col.	Format	Units
Sr	1	F6.2	mg/1
Sn	7	F6.2	mg/1
Ti	13	F6.1	mg/1
W	19	F6.2	mg/1
V	25	F6.1	mg/1
Zn	31	F6.2	mg/1
Zr	37	F6.0	mg/1
Alpha	43	F6.0	p Ci/1
Beta	49	F6.0	

Ca Formats

Tract: C-a
Monitoring Activity: Water Chemistry
Format: ch81
Period Covered: 1980

Parameter	Col.	Format	Units
date	2	3I2	mo-da-yr
station	8	A15	-
temp	23	F6.1	degrees C
ph	29	F6.1	standard units
spc_cond	35	F6.0	micro_umhos/cm
Ca	41	F6.0	mg/l
Mg	47	F6.0	mg/l
Na	53	F6.0	mg/l
K	59	F6.2	mg/l
Fe	68	F6.2	mg/l
HCO3	74	F8.2	mg/l

Record 2

Parameter	Col.	Format	Units
CO3	1	F7.2	mg/l
OH	7	F6.2	mg/l
SO_4	13	F6.0	mg/l
Cl	19	F7.2	mg/l
TSS	26	F6.0	mg/l
TCN	32	F6.2	
TSO4	38	F6.2	
TDS	44	F6.0	mg/l
ALK	50	F6.0	mg/l
Hard	56	F6.0	mg/l
ORTHOP	62	F6.2	mg/l
PO4	68	F6.2	mg/l

Record 3

Parameter	Col.	Format	Units
KJEL	1	F6.1	mg/1
NH3	7	F6.2	mg/1
NO2	13	F7.3	mg/1
NO3	19	F7.3	mg/1
F	25	F6.2	mg/1
S	31	F6.1	mg/1
SO3	37	F6.0	mg/1
Br	43	F6.1	mg/1
TOC	49	F6.0	mg/1
DOC	55	F6.0	mg/1
Cn	61	F7.3	mg/1
PHENOL	67	F6.2	mg/1

Record 4

Parameter	Col.	Format	Units
OG	1	F6.0	mg/1
BOD	7	F6.0	-
COD	13	F6.0	-
Al	19	F6.1	mg/1
Sb	25	F6.2	
As	31	F6.2	mg/1
Ba	37	F6.1	mg/1
Be	43	F6.2	mg/1
Bi	49	F6.2	mg/1
B	55	F6.2	mg/1
Cd	61	F6.1	mg/1
Cr	67	F6.2	mg/1

Record 5

Parameter	Col.	Format	Units
Cu	1	F7.3	mg/1
Ga	7	F6.1	mg/1
Ge	13	F6.1	mg/1
Pb	19	F7.3	mg/1
Li	25	F6.2	mg/1
Mn	31	F6.2	mg/1
Hg	37	F6.2	mg/1
MOL	43	F6.1	mg/1
Ni	49	F7.2	mg/1
Se	55	F6.2	mg/1
SiO2	61	F6.0	mg/1
Ag	67	F6.1	mg/1

Record 6

Parameter	Col.	Format	Units
Sr	1	F6.2	mg/l
Sn	7	F6.2	mg/l
Ti	13	F6.1	mg/l
W	19	F6.2	mg/l
V	25	F6.1	mg/l
Zn	31	F6.2	mg/l
Zr	37	F6.0	mg/l
Alpha	43	F6.0	p Ci/l
Beta	49	F6.0	

C-a Format

Tract: C-a
Monitoring Activity: Hydrology USGS Water Quality
Format: j48_9
Period Covered: 1984

Parameters	Col.	Format	Units
	Card 1		
station	1	A3	
date	8	3I2	mmddyy
flow	14	F6.2	
turbo 70	20	F6.2	
turbo 76	26	F6.2	
color	32	I6	
sp_cond	38	I6	
DO	44	I6	
BOD	50	I6	
COD	56	I6	
PH	60	I6	
CO2	68	I6	
Alk	74	I6	
	Card 2		
HCO3	1	I6	
CO3	7	I6	
Oil 550	13	I6	
Oil 556	19	I6	
N_TOT	25	I6	
N_DIS	31	I6	
Torg_N	37	I6	
Org_N	43	I6	
NH3N	49	I6	
TNH3_N	55	I6	
NO2_DIS	61	I6	
NO3_DIS	67	I6	
KJeL623	73	I6	
CC2	80	I1	
	Card 3		
KJeL625	1	I6	
TNO2NO3	7	I6	
NO2NO3	13	I6	
TPO4	19	I6	
O_PO4	25	I6	
TOT_P	31	I6	
DIS_P	37	I6	
DORTHOP	43	I6	
TOC	49	I6	

Card 3 cont.

DOC	55	I6
SUSP_OC	61	I6
Cyanide	67	I6
THS	73	I6
CC3	80	I1

Card 4

HS	1	I6
T_Hard	7	I6
NC_Hard	13	I6
Ca	19	I6
Mg	25	I6
Na	31	I6
SAR	37	I6
Per_Na	43	I6
Na_K	49	I6
K	55	I6
CL	61	I6
SO4	67	I6
F	73	I6
CC4	80	I1

Card 5

SIO2	1	I6
AS	7	I6
BA	13	I6
BE	19	I6
BI	25	I6
B	31	I6
CD	37	I6
CR	43	I6
CU	49	I6
FE	55	I6
PB	61	I6
MN	67	I6
MOL	73	I6
CC5	80	I1

Card 6

NI	1	I6
AG	7	I6
V	13	I6
ZN	19	I6
SN	25	I6
AL	31	I6
GA	37	I6
GE	43	I6
LI	49	I6
SE	55	I6
TI	61	I6

Card 6 cont.

ZR	67	I6
ODOR	73	I6
CC6	8D	I1

Card 7

T_ColI	1	I6
F_ColI	7	I6
PhenoL	13	I6
PCB	19	I6
TDS	25	I6
TDS2	31	I6
TDS3	37	I6
NH3	43	I6
NO3	49	I6
NO2	55	I6
BR	61	I6
HG	67	I6
SR	73	I6
CC7	80	I1

Tract: C-a
Monitoring Activity: Hydrology USGS Water Chemistry
Format: j48_8
Period Covered: 1984

Parameters	Col.	Format	Units
station	1	A3	
date	8	3I2	mmddyy
Qm	14	F6.2	
Thi	20	F6.1	
Tlow	26	F6.1	
Tm	32	F6.1	
Chi	38	F6.1	
Clow	44	F6.1	
Cm	50	F6.1	
SSM	56	F6.2	
SLM	62	F6.2	

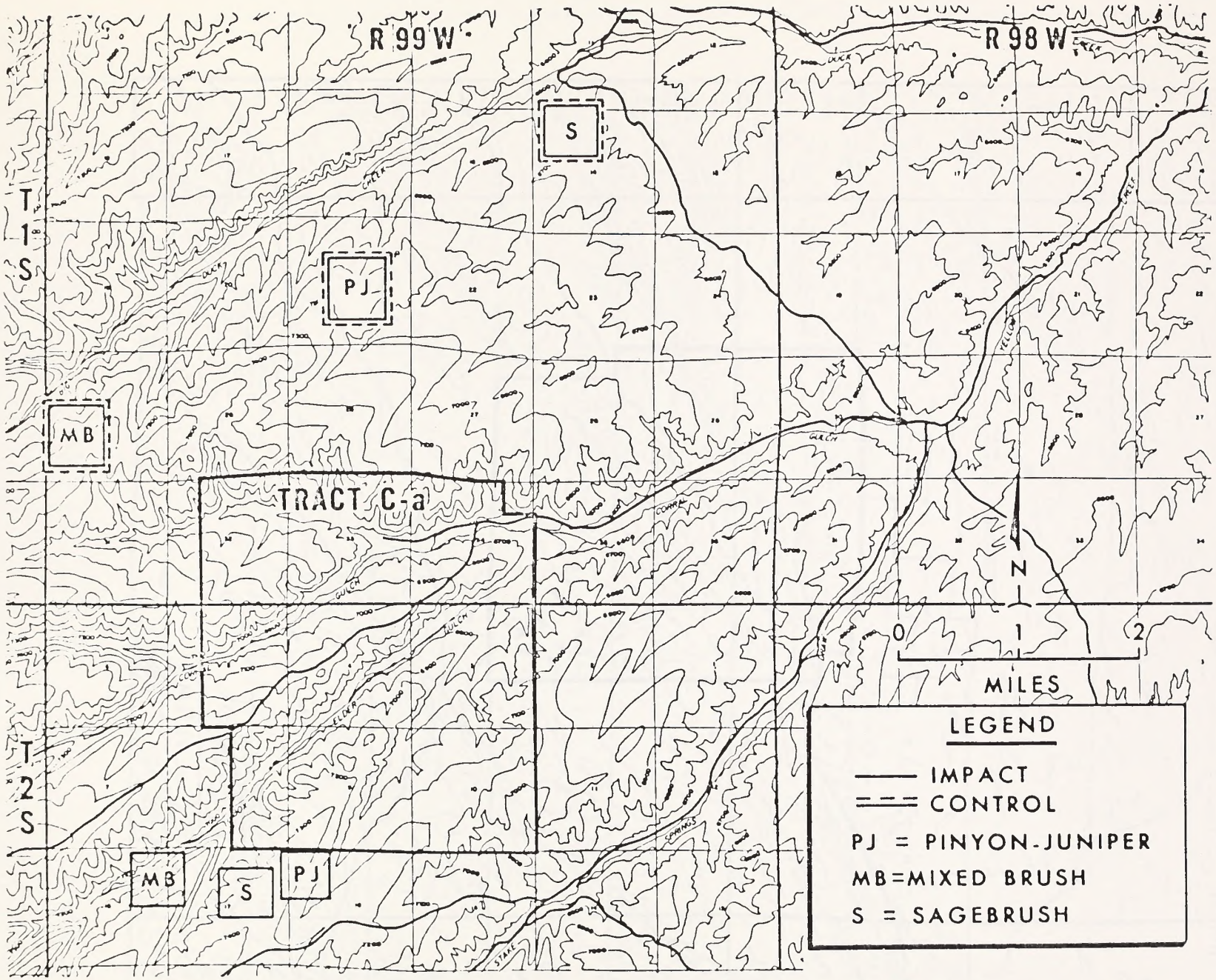


Figure 8-4-3

LOCATION OF THE VEGETATION MONITORING SITES

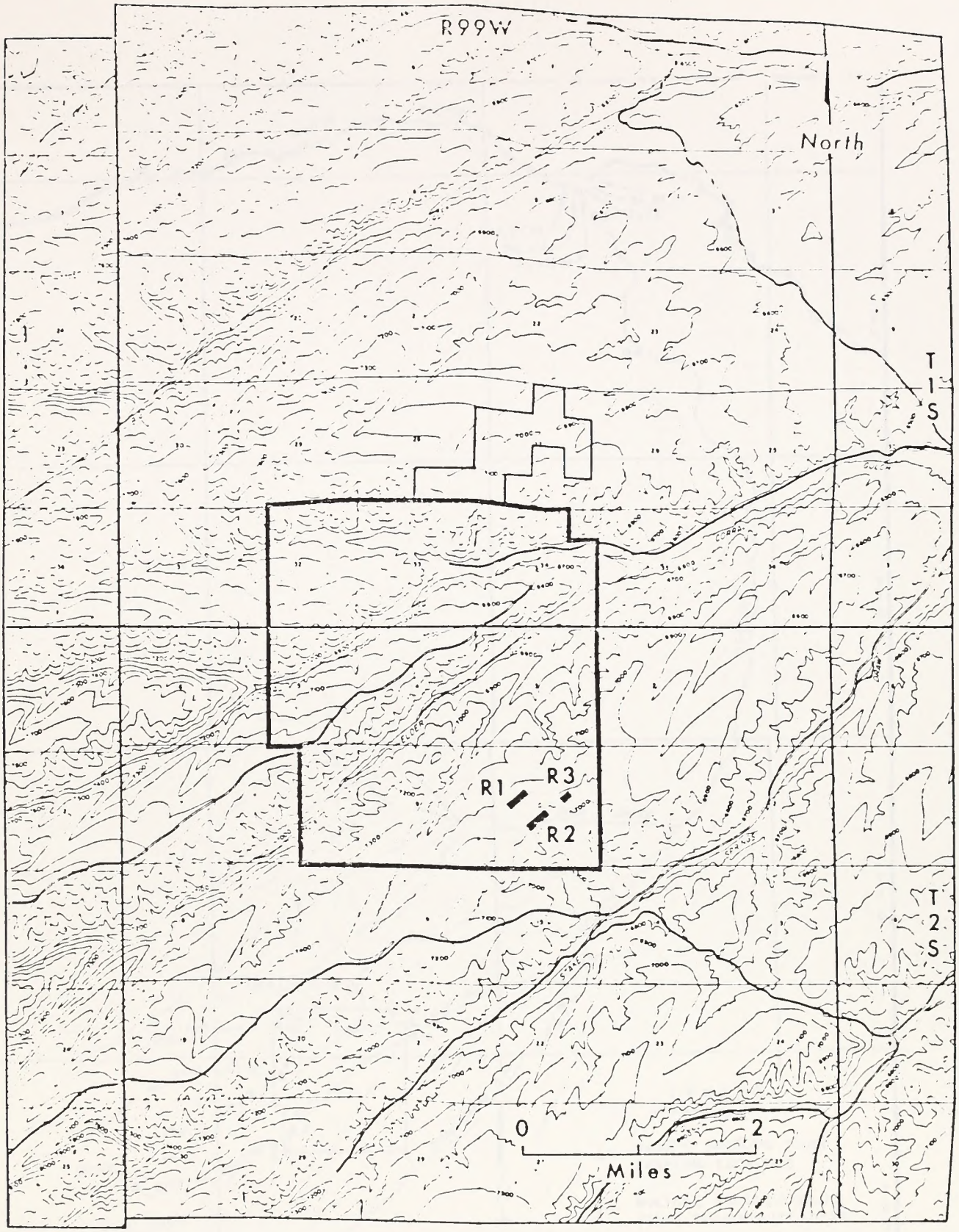


Figure 7-1
Experimental Revegetation Plots

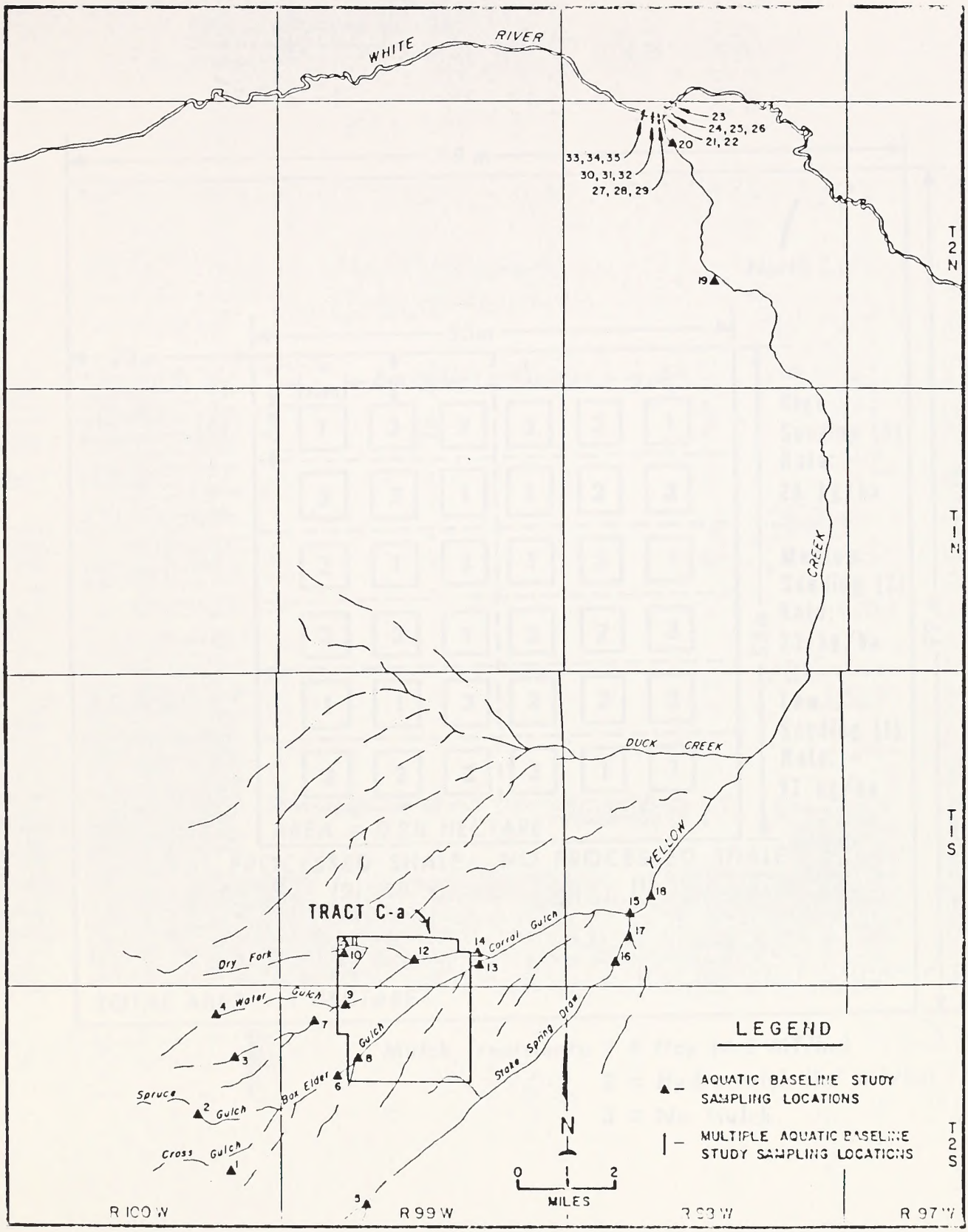


Figure 8-5-1

RBOSP AQUATIC SAMPLING LOCATIONS

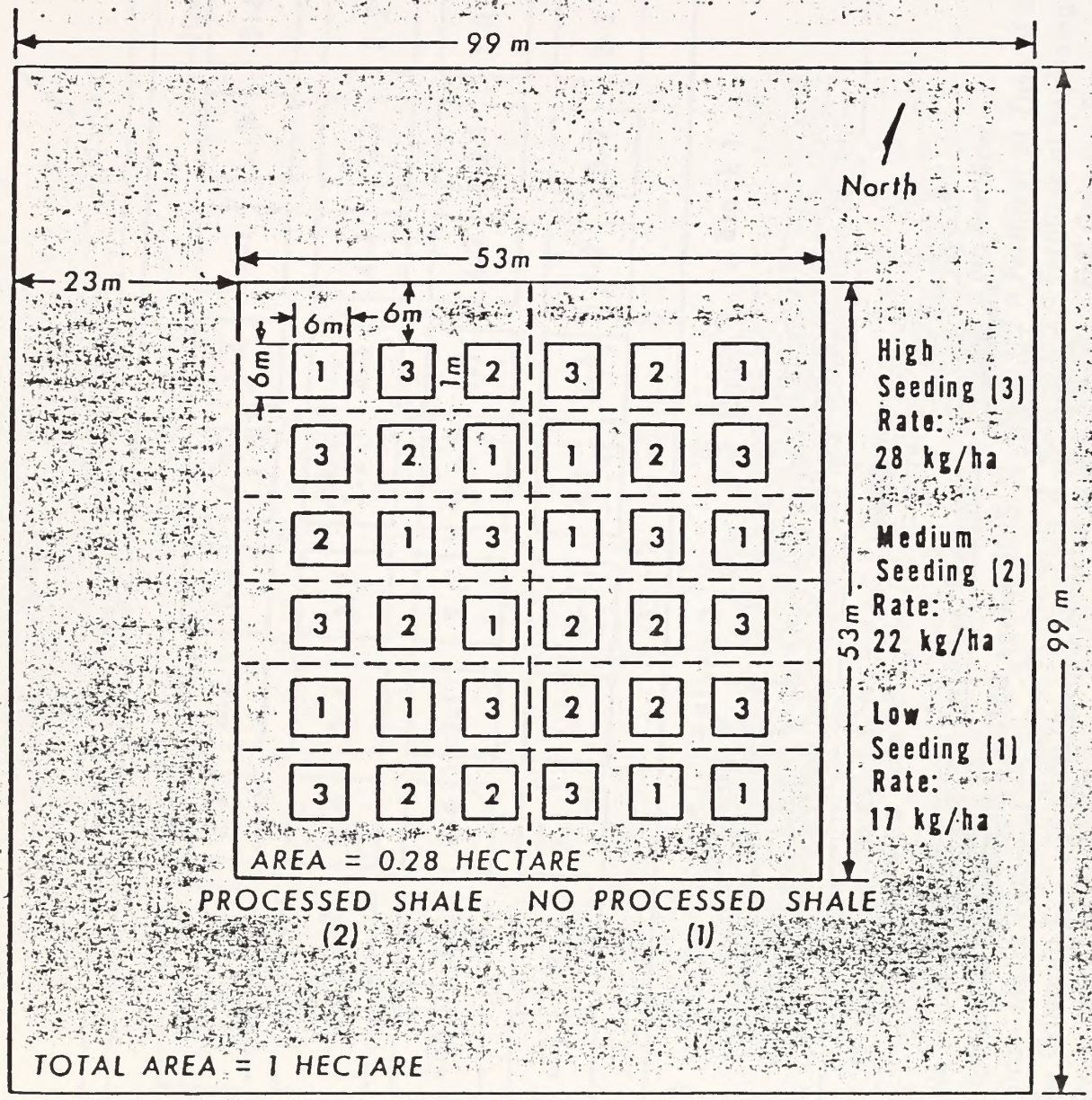
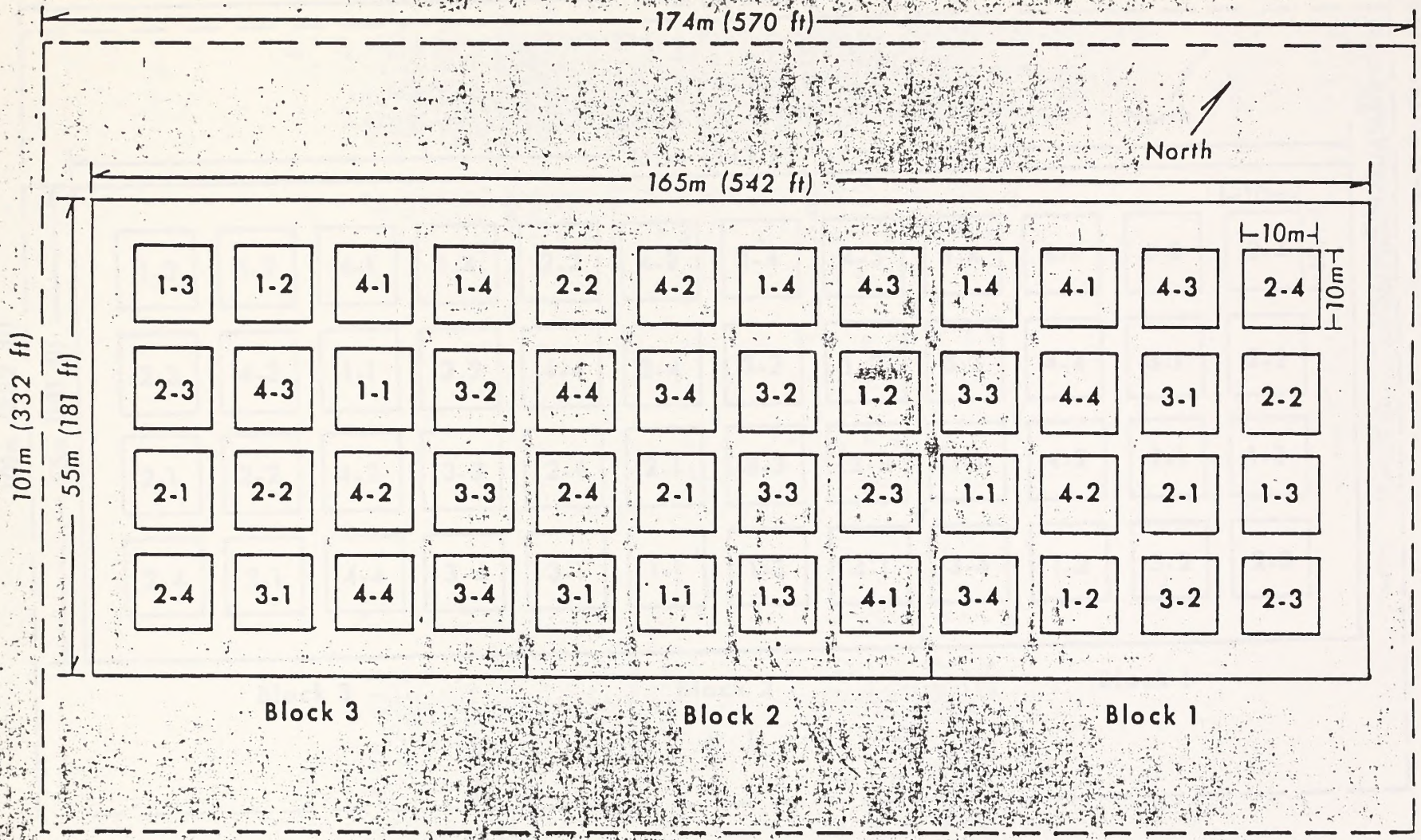


Figure 6-3. Configuration of Experimental Revegetation Plot over 'Tosco II' Processed Shale

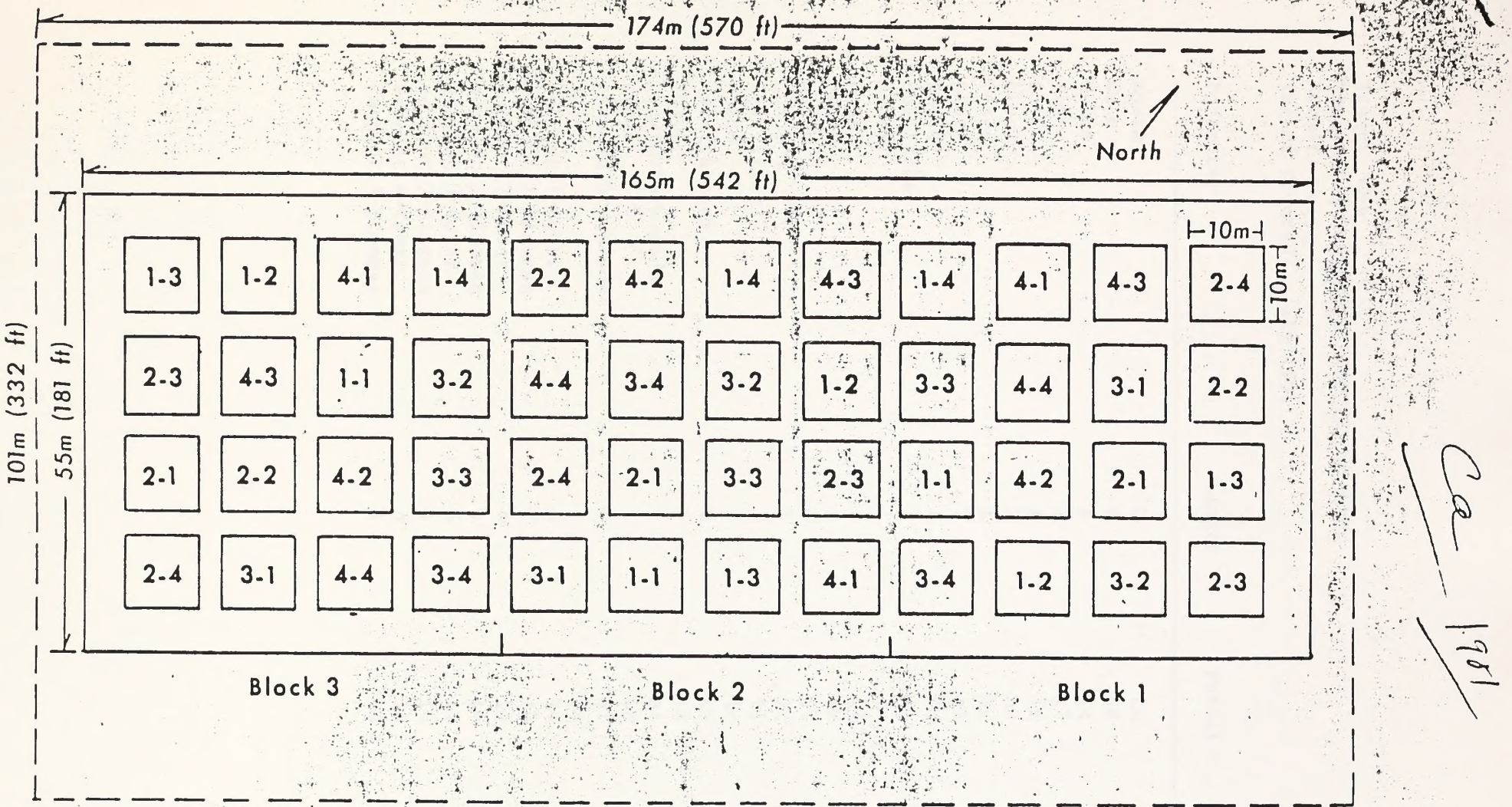


Seeding Rate 18 kg/ha (16 lb/acre)

Mulch Treatments: (Applied at Sowing: First Numeral in Treatment Designation)
1 = No Mulch
2 = Hydromulch
3 = Straw Mulch Followed by Crimping
4 = Straw Mulch With Netting

Fertilizer Treatments: (180 kg/ha, 10-5-5) (Second Numeral in Treatment Designation)
1 = No Fertilizer
2 = Fertilizer at Time of Sowing
3 = Fertilizer at Beginning of First Full Growing Season
4 = Fertilizer at Sowing & Beginning of First Full Growing Season

Figure 6.2. Treatment Configuration for Experimental Revegetation Plot R2, Tract C-a.



Seeding Rate 18 kg/ha (16 lb/acre)

Mulch Treatments: (Applied at Sowing: First Numeral in Treatment Designation)

1 = No Mulch
2 = Hydromulch
3 = Straw Mulch Followed by Crimping
4 = Straw Mulch With Netting

Fertilizer Treatments: (180 kg/ha, 10-5-5) (Second Numeral in Treatment Designation)

1 = No Fertilizer
2 = Fertilizer at Time of Sowing
3 = Fertilizer at Beginning of First Full Growing Season
4 = Fertilizer at Sowing & Beginning of First Full Growing Season

Figure 6-1. Treatment Configuration for Experimental Revegetation Plot R2, Tract C-a.

Tract: C-a
Monitoring Activity: SPECIAL STUDIES
Format: rvg81
Period Covered: July 1981

Parameter	Length	Format	Units
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
site	2	a2	-
space	1	1x	na
block	2	a2	-
space	1	1x	-
plot	2	a2	-
space	1	1x	na
substrate	1	i1	-
space	1	1x	na
seed	1	i1	-
space	1	1x	na
mulch	1	i1	-
space	1	1x	na
fertilizer	1	i1	-
space	1	1x	na
species.code	6	a6	-
space	1	1x	na
growth.form.code	1	a1	-
space	1	1x	na
planted.or.invaded	1	a1	-
space	1	1x	na
subplot 1-Cover	4	i4	
subplot 1-Biomass	4	i4	
subplot 2-Cover	4	i4	
subplot 2-Biomass	4	i4	
subplot 3-Cover	4	i4	
subplot 3-Biomass	4	i4	
subplot 4-Cover	4	i4	
subplot 4-Biomass	4	i4	

Tract: C-a
MOnitoring Activity: SPECIAL STUDIES
Format: g7678
Period Covered: 06/09/76 - 09/08/78

Parameter	Length	Format	Units
space	1	1x	na
date	6	a6	mmddyy
space	7	7x	na
site	2	a2	region/location
space	2	2x	na
subplot	3	i3	-
space	2	2x	na
substrate.code	2	i2	-
space	6	6x	na
mulche.code	2	i2	-
space	2	2x	na
species	7	a7	-
space	2	2x	na
data.type	2	a2	-
space	2	2x	na
biomass	8	f8.2	-
space	2	2x	na
fertilizer	1	i1	-
space	2	2x	na
e	1	a1	?

Ca_md Formats

Tract: C-a
Monitoring Activity: SPECIAL STUDIES
Format: rvg79
Period Covered: 8/02/79

Parameter	Length	Format	Units
space	1	1x	na
date	6	a6	mmddyy
space	2	2x	na
site	2	a2	-
space	2	2x	na
plot	3	i3	-
space	2	2x	na
subplot	3	i3	-
space	2	2x	na
substrate.code	2	i2	-
space	2	2x	na
seeding.rate.code	2	i2	-
space	2	2x	na
mulch.code	2	i2	-
space	2	2x	na
species	7	a7	-
space	2	2x	na
life.form.code	2	a2	-
space	2	2x	na
invasion.code	2	a2	-
space	2	2x	na
biomass	8	f8.2	-
space	2	2x	na
cover	8	f8.2	-

Ca_md Formats

Tract: C-a
Monitoring Activity: SPECIAL STUDIES
Format: rvg180, rvg280, rvg380
Period Covered: 8/12/80-8/15/80
8/07/80-8/12/80
8/05/80-8/06/80

Parameter	Length	Format	Units
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
site	2	a2	-
space	1	1x	na
block	2	a2	-
space	1	1x	na
plot	2	a2	na
space	1	1x	na
species	7	a7	-
space	1	1x	na
growth.form	1	a1	-
space	1	1x	na
planted.or.invaded	1	a1	-
space	1	1x	na
cover.estimate.subplot.1	3	i3	-
space	1	1x	na
cover.estimate.subplot.2	3	i3	-
space	1	1x	na
cover.estimate.subplot.3	3	i3	-
space	1	1x	na
cover.estimate.subplot.4	3	i3	-

Invaded = I, planted is a blank column.

Ca_md Formats

Tract: C-a
Monitoring Activity: SPECIAL STUDIES
Format: rvg379
Period Covered: 8/27/79-9/08/79

Parameter	Length	Format	Units
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
site	2	a2	-
space	1	1x	na
plot	3	a3	-
space	1	1x	na
subplot.sampled	3	a3	-
space	1	1x	na
substrate.code	4	a4	-
space	1	1x	na
seeding.rate.code	2	a2	-
space	1	1x	na
mulch.rate.code	2	a2	-
space	1	1x	na
species.code	7	a7	-
space	1	1x	na
growth.form.code	2	a2	-
space	1	1x	na
planted.or.invaded	2	a2	-
space	1	1x	na
biomass	8	f8.2	-
cover	8	f8.2	-

Invaded = I; planted or blank.

Note: If the species appears but has 0 for both biomass and cover, then it was detected in quantities too small to measure (p or t).

Ca_md Formats

Tract: C-a
Monitoring Activity: SPECIAL STUDIES - SHRUBS
Format: shd381
Period Covered: October 1981

Parameter	Length	Format	Unit
space	1	1x	na
site	2	a2	-
space	1	1x	na
plot	2	a2	-
space	1	1x	na
substrate	1	i1	-
space	1	1x	na
seed	1	i1	-
space	1	1x	na
mulch	1	i1	-
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
block	2	a2	-
space	1	1x	na
species.code	6	a6	-
space	1	1x	na
growth.form	1	a1	-
space	1	1x	na
age.class	2	i2	-
space	1	1x	na
plant.height	3	i3	-
space	1	1x	na
plant.diameter	3	i3	-

Tract: C-a
Monitoring Activity: SPECIAL STUDIES
Format: rclm81
Period Covered: 8/24/81

Parameter	Length	Format	Units
space	1	1x	na
transect	6	a6	-
space	1	1x	na
date	6	a6	mmddyy
space	1	1x	na
species.code	6	a6	-
space	1	1x	na
growth.foirm	1	a1	-
space	1	1x	na
invaded	1	a1	-
space	1	1x	na
cover.biomass	1	a1	-
space	1	1x	na
seed.mixture	1	a1	-
space	1	1x	na
subplots (1-10)	40	10i4	-
space	1	1x	na
date.seeded	6	a6	mmddyy

Tract: C-a
Monitoring Activity: TERRESTRIAL
Format: vg8081
Period Covered: 80-81

Parameter	Length	Format	Units
space	1	1x	na
habitat	2	a2	-
space	1	1x	na
transect		i2	-
space	1	1x	na
plot		i2	-
space	1	1x	na
seed		i1	-
space	1	1x	na
chop		i1	-
space	1	1x	na
fertilizer		i1	-
space	1	1x	na
orientation		i1	-
space	1	1x	na
date		a6	-
space	1	1x	na
species code		a6	-
space	1	1x	na
growth.form		a1	-
space	1	1x	na
invaded	1	a1	-
space	1	1x	na
parameter	1	a1	-
space	1	1x	na
cover.density	4	i4	-

Tract: C-a
Monitoring Activity: Vegetation - Cover R1 - R2
Format: j26_10, j26_11
Period Covered: 1976 - 1983, 1976 - 1983

Parameter	Col.	Format	Units
site	2	I1	
block	4	I1	
pest	5	I2	
mulch	9	I1	(ignore just.)
fertilizer	10	I1	
date	11	3A2	mo-da-yr
species	20	A6	
gr. form	26	A1	
sps. form	27	A1	
cover 1	28	I3	%
cover 2	34	I3	%
cover 3	40	I3	%
cover 4	46	I3	%

fert
- 1 = none
- 2 = at sowing
- 3 = first season
- 4 = both

mulch
- 1 = none
- 2 = hydro
- 3 = straw & crimping
- 4 = straw & netting

replaces jkc016.21 and jkc016.23

Tract: C-a
Monitoring Activity: Vegetation - Cover - R3
Format: j26_12
Period Covered: 1976 - 1983

Parameters	Col.	Format	Units
plot	5	I2	
substrate	7	I1	
seeding	8	I1	
mulch	9	I1	
date	11	3A2	mo-da-yr
species	20	A6	
gr_form	26	A1	
sps_type	27	A1	
cover 1	28	I3	%
cover 2	34	I3	%
cover 3	40	I3	%

plot = 1 to 36

replaces jkc016.25

seed
1 low (17kg/HA)
2 med (22kg/HA
3 high (28kg/HA)

substrate
1 no process shale
2 processed shale

mulch
1 hay (4.5mT/HA)
2 hydromulch (1.7mT/HA)
3 none

sps_type
I = invaded
X = planted

gr_form
F = forb
G = grass
S = shrub
T = tree
B = bare soil
R = rocks
L = Lichen
D = either
M = moss

Tract: C-a
Monitoring Activity: Revegetation R3, Soil Moisture
Format: j26_13
Period Covered:

Parameter	Col.	Format	Units
site	1	A2	
plot	5	I2	
substrate	7	I1	
seed	8	I1	
mulch	9	I1	
date	11	3A2	mo-da-yr
top	20	F5.1	%
mid	25	F5.1	%
bottom	30	F5.1	%

C-a Format

Tract: C-a
Monitoring Activity: Revegetation Bench test, Soil Moisture
Format: j26_14
Period Covered:

Parameters	Col.	Format	Units
date	1	3A2	mo-da-yr
fence	7	I1	
soil	8	I1	
slope	9	I1	
row	10	A1	
num	11	I1	
top	15	F5.1	%
mid	20	F5.1	%
bottom	25	F5.1	%
obs month	30	I2	
rptype	35	I4	

C-a Formats

Tract: C-a
Monitoring Activity: Revegetation Bench Test - Plant Height - Diameter
Format: j26_15
Period Covered:

Parameter	Col.	Format	Units
date	1	3A2	mo-da-yr
fence	7	I1	
soil	8	I1	
slope	9	I1	
row	10	A1	
plot_no.	11	I2	
species	13	A6	
gr_form	19	A1	
status	20	A1	
ph	21	I4	cm
pd	25	I5	cm

Tract: C-a
Monitoring Activity: Vegetation - Yellow Creek Burn Recovery - Cover
Format: j26_16
Period Covered:

Parameter	Col.	Format	Units
block	1	I2	
plot	3	A3	
fence	6	I1	
seed	7	I1	
cage	8	I1	
date	9	3A2	mo-da-yr
species	18	A6	
gr_from	24	A1	
sps_type	25	A1	
cover	26	I4	%

Tract: C-a
Monitoring Activity: R3 Conductivity Data
Format: j16.28
Period Covered:

Parameters	Col.	Format	Units
Season 1	A4		
report year	5	I4	
year			
replicate 10	I1		
0 cm depth conductivity	15	I2	
25 cm depth conductivity	20	I2	
50 cm depth conductivity	25	I2	

Tract: C-a
Monitoring Activity: Revegetation R3 Plant Tissue Analysis
Format: j16.29
Period Covered: not given

Parameters	Col.	Format	Units
species	1	A6	
substrate	8	I1	
seeding type	10	I1	
identification	12	I2	
Arsenic	15	F5.2	
Boron	21	F4.1	
Flouride	26	F3.1	
Molybdum	30	F3.1	
Selenium	34	F5.2	

Tract: C-a
Monitoring Activity: Special Studies - Reclamation Success
Format: j16.31
Period Covered: 1982

Parameters	Col.	Format	Units
transect	1	I6	
date	7	3I2	mo-da-yr
observer	13	A3	
species	16	A6	
gr-form	22	A1	
invaded	23	A1	
cover/biomass	24	A1	C or B
seed mixture	25	I1	
subplot 1	26	I3	
subplot 2	29	I3	
subplot 3	32	I3	
subplot 4	35	I3	
subplot 5	38	I3	
subplot 6	41	I3	
subplot 7	44	I3	
subplot 8	47	I3	
subplot 9	50	I3	
subplot 10	53	I3	
date seeded	56	3I2	
type	62	A1	

Ca_md Formats

Tract: C-a
Monitoring Activity: Revegetation Biomass Site R2
Format: j16.26
Period Covered: 1979 - 1982

Parameters	Col.	Format	Units
plot	1	I2	
substrate	5	I1	
seeding	10	I1	
mulch	15	I1	
date	20	3I2	mo-da-yr
species	30	A6	
gr_form	38	A1	
spc_time	39	A1	
BM01	45	F5.1	
BM02	50	F5.1	
BM03	55	F5.1	

Ca_md Formats

Tract: C-a
Monitoring Activity: Range Productivity
Format: j16.20
Period Covered: 1978 - 1982

Parameters	Col.	Format	Units
veg_type	1	A2	
transect	3	I2	
date	5	3I2	mo-da-yr
species	14	A6	
gr_form	20	A1	
plot	21	I2	
exclo	23	A1	
dry_lot	25	F6.1	
Kg_Ha	31	F6.1	
lbs_A	37	F6.1	

Ca_md Format

Tract: C-a
Monitoring Activity: Special Studies Habitat Mod
Format: j16.30
Period Covered: 1982

Parameter	Col.	Format	Units
veg-type	1	A2	
transect	3	I2	
plot no.	5	I2	
seed rate	7	I1	
chopped/not chopped	8	I1	
fertilizer	9	I1	
orientation	10	I1	
date	11	3I2	mo-da-yr
observer	17	A3	
species	20	A6	
growth form	26	A1	
species type	27	A1	
parameter measured	28	A1	C or D
cover/density	29	I4	

C-a Format

Tract: C-a
Monitoring Activity: R-1,2 Cover Reveg.
Format: j48_15, j48_12
Period Covered: 1984, 1984

Parameters	Col.	Format	Units
site	2	I1	
block	4	I1	
plot	5	I2	
mulch	9	I1	
fertilizer	10	I1	
date	11	3I2	mo-da-yr
species	20	A6	
Gr-firm	26	A1	
sps-type	27	A1	
cover 1	28	I3	
cover 2	34	I3	
cover 3	40	I3	
cover 4	46	I3	

C-a Format

Tract: C-a
Monitoring Activity: R-3 Cover Reveg.
Format: j48_11
Period Covered: 1984

Parameters	Col.	Format	Units
plot	5	I2	
substrate	7	I1	
seeding	8	I1	
mulch	9	I1	
date	11	3I2	mo-da-yr
species	20	A6	
gr_firm	26	A1	
sps_type	27	A1	
cover 1	28	I3	
cover 2	34	I3	
cover 3	40	I3	

C-a Format

Tract: C-a
Monitoring Activity: R-3 Soil Moisture
Format: j48_10
Period Covered: 1984

Parameters	Col.	Format	Units
site	1	A2	
plot	4	I2	
subs	7	I1	
seed	8	I1	
mulch	9	I1	
date	11	3I2	mo-da-yr
top	20	F5.1	
mid	25	F5.1	
bot	30	F5.1	

C-a Format

Tract: C-a
Monitoring Activity: Bench Test - Plant Height and Diameter
Format: j48_7
Period Covered: 1984

Parameters	Col.	Format	Units
date	1	3I2	mmddyy
fence	7	I1	
soil	8	I1	
slope	9	I1	
row	10	A1	
plot No.	11	I2	
species	13	A6	
gr_firm	19	A1	
status	20	A1	
ph - plant height	21	I1	
pd - plant diameter	25	I5	

C-a Format

Tract: C-a
Monitoring Activity: Branch Test - Soil Moisture
Format: j48_5
Period Covered: 1984

Parameters	Col.	Format	Units
date	1	3I2	mmddyy
fence	7	I1	
soil	8	I1	
slope	9	I1	
row	10	A1	
num	11	I2	
top	16	F5.1	
mid	21	F5.1	
bottom	26	F5.1	

Tract: C-a
Monitoring Activity: Revegetation
Format: Rvg80
Period Covered: 1980

Parameter	Col.	Format	Units
date	2	A6	mo-da-yr
site	9	A2	
block	12	A2	
PLT	15	A2	
SPEC	18	A7	
growth form	26	A1	
planted or invaded	28	A1	P or I
subplot 1 cover estimated	30	I3	
subplot 2 cover estimated	34	I3	
subplot 3 cover estimated	38	I3	
subplot 4 cover estimated	42	I3	